

No. 12848

United States
Court of Appeals

For the Ninth Circuit.

serial — 2675
THE PARKER APPLIANCE COMPANY, a Corporation,

Appellant,

vs.

IRVIN W. MASTERS, INC., and JOSEPH C. COLLINS, Doing Business Under the Firm Name and Style of Collins Engineering Company,

Appellee.

Transcript of Record
IN FOUR VOLUMES

Volume I
(Pages 1 to 466)

Appeal from the United States District Court,
Southern District of California
Central Division.

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INDEX

[Clerk's Note: When deemed likely to be of an important nature, errors or doubtful matters appearing in the original certified record are printed literally in *italic*; and, likewise, cancelled matter appearing in the original certified record is printed and cancelled herein accordingly. When possible, an omission from the text is indicated by printing in *italic* the two words between which the omission seems to occur.]

| | PAGE |
|---|----------|
| Answer and Counterclaim Civil Action No. 7874-B | 10 |
| Answer and Counterclaim Civil Action No. 8023-W | 41 |
| Appellees' Substitute Counter-Designation of Record and Order as to Physical Exhibits... | 1317 |
| Certificate of Clerk..... | 1296 |
| Complaint Civil Action No. 7874-B..... | 3 |
| Plaintiff's Exhibit No. 1—See Note..... | 9 |
| 2—See Note..... | 9 |
| Complaint Civil Action No. 8023-W..... | 34 |
| Plaintiff's Exhibit No. 1—See Note..... | 40 |
| 2—See Note..... | 40 |
| Depositions of: | |
| Amon, Frederick E., Jr. | |
| —direct | 927, 985 |
| —cross | 992 |
| —redirect | 1041 |
| —recross | 1041 |

INDEX

PAGE

Depositions of—(Continued):

Bergh, Roland C.

—direct1192

—cross1207

Clark, William D.

—direct1115

—cross1141

Davies, Robert Henry

—direct1045

—cross1083

Ehmann, W. Howard

—direct1107

—cross1113

Greer, Edward M.

—direct1156

—cross1177

Designation of Record for Plaintiff-Appellant.1304

Exhibits, Defendants':

A —Wolfram's Sketch of What
 Patent Means.....1410

B —Wolfram's Sketch of Varia-
 tions Under Patent.....1411

C —Wolfram's Sketch of Varia-
 tions Under Patent.....1412

INDEX

PAGE

Exhibits, Defendants'—(Continued):

| | | |
|-----|---|------|
| E | —Wolfram's Sketch Showing Variation in Sketch Sleeve Head | 1413 |
| H | —Drawing No. AND10061..... | 1414 |
| H-1 | —Drawing AN818 | 1415 |
| H-2 | —Drawing AN819 | 1416 |
| H-3 | —Drawing AND10056 | 1417 |
| H-4 | —Drawing AN817 | 1418 |
| H-5 | —Drawing AND10064 | 1419 |
| I | —Drawing 811 T Sleeve..... | 1420 |
| J | —Drawing 811 BT Sleeve..... | 1421 |
| K | —Drawing 811 FT Body..... | 1422 |
| L | —Parker Drawing No. 2-1835.. | 1423 |
| M | —Parker Drawing No. 2-1835-1. | 1424 |
| N | —Parker Drawing No. 2-1835-2. | 1425 |
| S | —Summation Sheet Sleeve Head Expansion Tests | 1426 |
| RR | —Certified Copy of File History Patent in Suit No. 2,212,183.. | 1427 |
| SS | —Stipulation and Contents Re Publication "Pipes and Tubes," Philip R. Bjorling, 1902 Library of Congress No. TS 280 B6..... | 1465 |

INDEX

PAGE

Exhibits, Defendants'—(Continued):

| | | |
|-----|---|------|
| OOO | —Size A Drawing No. 12-1133-3, Revision M. This Substitute Designation | 1470 |
| II | —Colored Chart AN-6 to Mini- mum Clearance Assembly from Drawings | 1471 |
| JJ | —Colored Chart Assembly from Parker 1935 Drawings Mini- mum Clearance Condition.... | 1472 |
| KK | —Colored Comparative Chart.. | 1473 |

Exhibits, Plaintiff's:

| | | |
|-------|--|------------|
| No. 1 | —Patent No. 2,212,183..... | 1323 |
| 2 | —Assignment | 1327 |
| 12 | —Deposition of Irvin W. Mas- ters | 1225, 1333 |
| 12-A | —Letter from Masters to Re- public Aviation Corp..... | 1333 |
| 13 | —Deposition of Joseph C. Col- lins | 1263, 1335 |
| 14 | —Letter from Parker to Mas- ters | 1336 |
| 15 | —Letter from Parker to Mas- ters | 1337 |
| 15-A | —Letter from Masters, Inc., to Army Air Forces..... | 1338 |

INDEX

PAGE

Exhibits, Plaintiff's—(Continued):

| | | |
|--------|--|------|
| No. 16 | —Letter from Parker to Mas- ters | 1339 |
| 25 | —Parker Patent No. 1,893,442.. | 1341 |
| 26 | —Parker Patent No. 1,977,240.. | 1344 |
| 28-A | —Stage Drawing—Typical Tu- bing Installation | 1348 |
| 28-B | —Stage Drawing Tubing vs. Pipe | 1349 |
| 28-C | —Stage Drawing — Tubing vs. Pipe | 1350 |
| 28-D | —Stage Drawing—Typical Fit- ting for Lead Pipe..... | 1351 |
| 28-E | —Stage Drawing—Wall Thick- ness of Flare Thins Out on Hard Tubes | 1352 |
| 28-F | —Stage Drawing—Typical Two- Piece Fitting for Thin Wall Hard Tubes | 1353 |
| 28-G | —Stage Drawing — Typical Three-Piece Fitting for Thin Wall Hard Tubes..... | 1354 |
| 28-H | —Stage Drawing — Improved Three-Piece Fitting, Parker Patent 2,212,183 | 1355 |
| 28-I | —Stage Drawing — Sleeve Head Angle, Parker Patent 2,212,183 | 1356 |

INDEX

PAGE

Exhibits, Plaintiff's—(Continued):

| | | |
|----------|--|------|
| No. 28-J | —Stage Drawing — Advantages of Sleeve Head Angle, Per- mits Free Expansion of Sleeve Head | 1357 |
| 28-K | —Stage Drawing — Advantages of Sleeve Head Angle Expan- sion of Sleeve Head Provides Hoop Tension | 1358 |
| 28-L | —Stage Drawing — Advantages of Sleeve Head Angle Hoop Tension Locks Nut Against Loosening | 1359 |
| 28-M | —Stage Drawing — Advantages of Sleeve Head Angle Free Expansion Corrects Out-of- Round Sleeves | 1360 |
| 28-N | —Stage Drawing — Advantages of Sleeve Head Angle Expan- sion Converts Toe Contact to Area Contact | 1361 |
| 28-O | —Stage Drawing — Advantages of Sleeve Head Angle Expan- sion Makes Amount of Nut Turning Less Critical..... | 1362 |
| 28-P | —Stage Drawing — Advantages of Sleeve Head Angle. Angle Provides More Room for Ex- pansion Where Expansion Is Greatest | 1363 |

Exhibits, Plaintiff's—(Continued):

- No. 28-Q —Stage Drawing — Advantages
of Sleeve Head Angle. Angle
Permits Maximum Shoulder
Contact1364
- 28-R —Stage Drawing — Advantages
of Sleeve Head Angle. Angle
Facilitates Disassembly of
Sleeve from Nut.....1365
- 28-S —Stage Drawing — Advantages
of Sleeve Head Angle. Angle
Provides Additional Clearance
to Avoid Locking of Sleeve to
Nut1366
- 28-T —Stage Drawing — Advantages
of Sleeve Head Angle. Angle
Prevents Scoring of Flare....1367
- 28-U —Stage Drawing — Advantages
of Sleeve Head Angle. Angle
Prevents Twisting of Tube...1368
- 28-V —Stage Drawing — Advantages
of Sleeve Head Angle. Angle
Facilitates Disassembly of
Bent Tubes1369
- 28-W —Stage Drawing — Advantages
of Sleeve Head Angle. Angle
Facilitates Disassembly of
Damaged and Tagged Tubes..1370

INDEX

PAGE

Exhibits, Plaintiff's—(Continued):

| | | |
|----------|---|------|
| No. 28-X | —Stage Drawing — Differential Angle Parker Patent 2,212,-183 | 1371 |
| 28-Y | —Stage Drawing — Advantages of Differential Angle. Toe Contact Facilitates Formation of Holding Nub..... | 1372 |
| 28-Z | —Stage Drawing — Advantages of Differential Angle. Toe Contact Tends to Produce Line Type Seal..... | 1373 |
| 28-AA | —Stage Drawing — Advantages of Differential Angle. Toe Contact Resists Vibration Failure | 1374 |
| 28-BB | —Stage Drawing — Advantages of Differential Angle. Toe Contact Compensates for Misaligned Flares | 1375 |
| 28-CC | —Stage Drawing — Advantages of Differential Angle. Toe Contact Avoids Weakening of the Flare at Its Base..... | 1376 |
| 28-DD | —Stage Drawing — Advantages of Differential Angle. Toe Contact Facilitates Expansion of Sleeve Head..... | 1377 |

INDEX

PAGE

Exhibits, Plaintiff's—(Continued):

| | |
|--|------|
| No. 28-EE—Stage Drawing — Advantages of Differential Angle. Toe Contact Increases Wrench Torque Range | 1378 |
| 47 —Drawing of Tube and Cou- pling | 1379 |
| 48 —Drawing of Tube and Cou- pling with Hand Written Markings | 1380 |
| 49 —Photostat Having to Do With Zones A, B, C..... | 1381 |
| 50 —Chart of Claim 1 and Photo of Patent Drawing 2,212,183.. | 1382 |
| 51 —Photostat of Patent Drawings and Claim 2, 2,212,183..... | 1383 |
| 52 —Photostat of Patent Drawings and Claim 3, 2,212,183..... | 1384 |
| 53 —Photostat of Drawing of Mas- ters Fitting and Claim 1, 2,212,183 | 1385 |
| 54 —Invoice of Masters..... | 1386 |
| 55 —Invoice of Masters..... | 1387 |
| 56 —Photostat, Masters' Deposition Fittings, Measurement of Parts | 1388 |

INDEX

PAGE

Exhibits, Plaintiff's—(Continued):

| | | |
|--------|--|------|
| No. 57 | —Photostat, Collins Deposition Fittings, Measurements of Parts | 1389 |
| 58 | —Photostat of Masters Fittings and Claim 2, 2,212,183..... | 1390 |
| 59 | —Photostat of Collins Fitting and Claim 2, 2,212,183..... | 1391 |
| 62 | —Charts, Indicating Measure- ments | 1392 |
| 62-A | —Charts, Indicating Measure- ments | 1393 |
| 70 | —Drawing Referred to in Amon Deposition | 1394 |
| 72 | —Document Entitled "Aircraft Report" | 1395 |
| 73 | —Letter from Parker to Asst. Chief, Material Division, Wright Field, March 3, 1941.. | 1401 |
| 73-A | —Letter from War Dept. Air Corps to Parker, May 25, 1942 | 1403 |
| 73-B | —Letter from Parker to Com- manding General, Army Air Forces, June 18, 1942..... | 1405 |
| 77 | —Final Judgment by Parker Against V. L. Graf..... | 1407 |

INDEX

PAGE

Exhibits, Plaintiff's—(Continued) :

| | | |
|---|---|-----------|
| No. 78 | —Photograph of No. 22695, Fig. 3 (From Douglas Aircraft Re- port) | 1409 |
| Final Judgment | | 89 |
| Findings of Fact and Conclusions of Law..... | | 78 |
| Conclusions of Law..... | | 86 |
| Findings of Fact..... | | 78 |
| Names and Addresses of Attorneys..... | | 1 |
| Notice of Appeal..... | | 91 |
| Notice of Intention to Take Depositions Civil Action No. 7874-B..... | | 924, 1104 |
| Opinion | | 65 |
| Reply to Counterclaim Civil Action No. 7874-B | | 25 |
| Plaintiff's Exhibit No. 3—Letter Dated July 19, 1946 | | 31 |
| 4—Letter Dated July 22, 1946 | | 32 |
| Reply to Counterclaim Civil Action No. 8023-W | | 56 |
| Plaintiff's Exhibit No. 3—Letter Dated Jan. 13, 1948 | | 62 |
| 4—Letter Dated Feb. 2, 1948. | | 64 |
| Statement of Points for Plaintiff-Appellant.. | | 1299 |

| INDEX | PAGE |
|---|-------------------------|
| Transcript of Proceedings..... | 92 |
| Opening Statement on Behalf of Defendants | 115 |
| Opening Statement on Behalf of Plaintiff. | 97 |
| Witnesses, Defendants': | |
| Adams, Harold W. | |
| —direct | 708, 746 |
| —cross | 771, 788, 820 |
| —redirect | 825 |
| —recross | 831 |
| Bumb, Richard C. | |
| —direct | 697 |
| —cross | 706 |
| Masters, Irvin W. | |
| —direct | 562, 571, 612, 850, 868 |
| —cross | 642, 651, 853, 870 |
| —redirect | 676, 856 |
| —recross | 681, 857 |
| Wagner, Charles H. | |
| —direct | 839 |
| Wolfram, John N. | |
| —direct | 833 |

INDEX

PAGE

Witnesses, Plaintiff's:

Hosterman, Fred

—direct 871

—cross 878

—redirect 880

Masters, Irvin W.

—direct 554

Middleton, Ralph

—direct 881

—cross 895

Murphy, Frank

—direct 858

—cross 863

Wagner, Charles H.

—direct176, 520

—cross177, 541

Wolfram, John N.

—direct179, 194, 234, 273, 326, 903

—cross366, 412, 467, 912

—redirect 483

—recross 505

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In the District Court of the United States, Southern District of California, Central Division

Civil Action No. 7874-B

THE PARKER APPLIANCE COMPANY,

Plaintiff,

vs.

IRVIN W. MASTERS, INC.,

Defendant.

COMPLAINT FOR INFRINGEMENT OF
UNITED STATES LETTERS PATENT
No. 2,212,183

To: The Honorable Judges of the United States District Court, in and for the Southern District of California, Central Division, Ninth Circuit.

Plaintiff, The Parker Appliance Company of Cleveland, Ohio, for its complaint against Irvin W. Masters, Inc., of Burbank, California, Defendant, alleges:

I.

Plaintiff, The Parker Appliance Company, is a corporation organized under and existing by virtue of the laws of the State of Ohio and has its principal office and place of business in the City of Cleveland, in the County of Cuyahoga and State of Ohio, and has a regular and established place of business in the City of Los Angeles, in the County of Los Angeles and State of California.

II.

Defendant, Irvin W. Masters, Inc., is a corporation organized under and existing by virtue of the laws of the State of California and has its principal office and place of business in the City of Burbank, in the County of Los Angeles and State of California, within the Southern District of California, Central Division.

III.

This is a suit arising under the Patent Laws of the United States for infringement of United States Letters Patent issued to Arthur L. Parker of Cleveland, Ohio, Number 2,212,183, dated August 20, 1940, upon an application filed March 2, 1938, and Plaintiff seeks the equitable remedy of an injunction and asks for an accounting of profits and an award for damages.

IV.

On March 2, 1938, Arthur L. Parker, being the first, original and sole inventor of certain improvements in Tubing Coupling, filed in the United States Patent Office, his application for Letters Patent thereon, Serial No. 193,569.

V.

On August 20, 1940, United States Letters Patent Number 2,212,183 for said invention were duly issued to said Arthur L. Parker. A copy of said Parker Patent Number 2,212,183 is attached hereto and marked "Plaintiff's Exhibit 1."

VI.

By written instrument, dated December 28, 1943, and duly recorded in Liber B-198, page 4 of the Transfers of Patents of the United States Patent Office, on December 30, 1943, said Arthur L. Parker assigned his entire right, title and interest in and to said invention and in and to said Letters Patent Number 2,212,183, together with all claims and demands in law or equity for possible infringement of said patent, to The Parker Appliance Company of Cleveland, Ohio. A copy of said Assignment is hereto attached and marked "Plaintiff's Exhibit 2."

VII.

The aforesaid invention of said Letters Patent Number 2,212,183 is of great utility and value and a large number of Tube Couplings, embodying the invention of said Letters Patent, have been manufactured and sold by Plaintiff, and licensees of the Plaintiff; and said invention is of great benefit and advantage to the public; and subsequent to the issue of said Letters Patent manufacturers of Tube Couplings have acknowledged and acquiesced in said Letter Patent.

VIII.

Under date of October 16, 1947, licenses were granted by Plaintiff to the Pacific Screw Products Corporation of Southgate, California, and The Deutsch Company of Los Angeles, California, under said Letters Patent Number 2,212,183.

IX.

During World War II millions of said Tube Couplings, embodying the invention of said Letters Patent Number 2,212,183, were used by the Armed Forces of the United States and Plaintiff made the invention of said Letters Patent available to the United States free of any royalty or any claim.

X.

Defendant, Irvin W. Masters, Inc., has had full knowledge of said Letters Patent Number 2,212,183 and its infringement of said Letters Patent and the Plaintiff has given written notice of said infringement to Defendant.

XI.

Defendant, since the issue of said Letters Patent and within six years prior to the filing of this complaint unlawfully and without license has infringed said Letters Patent and Plaintiff's rights thereunder by making, using, selling, and offering to sell Tube Couplings, embodying the invention of said Letters Patent, and Defendant has caused and is causing others to infringe said Letters Patent by using Tube Couplings of its manufacture; and by so infringing said Letters Patent, Defendant has realized and received gains and profits which otherwise would have been received by Plaintiff.

XII.

Defendant is continuing and threatens to con-

tinue the infringing acts herein complained of and by reason of said infringement and continued threats of infringement, Plaintiff has been greatly damaged and the injury is irreparable and for such injury and damage Plaintiff has no adequate remedy at law.

Wherefore, Plaintiff prays:

1. That a decree be signed and entered by this Honorable Court holding, declaring and adjudging that Arthur L. Parker is the true, first, sole and original inventor of the invention set forth and described in said Patent Number 2,212,183 and of all material and substantial parts thereof; and that the entire right, title and interest in and to the invention of said Letters Patent Number 2,212,183 is vested in the Plaintiff, The Parker Appliance Company, and that Defendant has infringed upon the claims thereof.

2. That this Honorable Court award a permanent injunction and a preliminary injunction during the pendency of this suit restraining and enjoining the Defendant, its officers, agents, attorneys, servants, employees and all others acting by and under its direction and authority, its successors or assigns from manufacturing or causing to be manufactured, from using or causing to be used, from selling or causing to be sold Tube Couplings made in accordance with and embodying the invention of said Parker Patent Number 2,212,183 and from infringing upon or violating the invention of said Letters Patent in any way whatsoever.

3. That an accounting be awarded to Plaintiff

of Defendant's profits, gains and advantages and the damages sustained by Plaintiff because of Defendant's infringement upon said Letters Patent.

4. That Defendant be required to pay the costs of this suit.

5. That Plaintiff have such other and further relief as is just.

THE PARKER APPLIANCE
COMPANY,

By /s/ C. J. WAGNER, JR.

Vice-President.

/s/ LEONARD S. LYON,

/s/ WILL FREEMAN,

Of Counsel for Plaintiff.

State of Ohio,

County of Cuyahoga—ss.

C. H. Wagner, Jr., being duly sworn, deposes and says that he is Vice-President of The Parker Appliance Company, Plaintiff in the foregoing complaint; that he has read the said complaint and that the facts therein stated are true of his own knowledge, except as to the facts which may be stated on information and belief and as to those facts he believes them to be true; and that the reason why this verification is not made by said The Parker Appliance Company personally, is that said

The Parker Appliance Company is a corporation,
of which affiant is a duly qualified officer.

/s/ C. J. WAGNER, JR.

Subscribed and sworn to before me, a Notary
Public in and for said County and State, this 23rd
day of December, 1947.

[Seal] HELEN TUSIN,
Notary Public.

My Commission expires Feb. 25, 1948.

PLAINTIFF'S EXHIBIT No. 1

Patent No. 2,212,183—A. L. Parker

[See Page 1323 Volume IV—Book of Exhibits.]

PLAINTIFF'S EXHIBIT No. 2

Assignment

[See Page 1327 Volume IV—Book of Exhibits.]

[Endorsed]: Filed Dec. 29, 1947.

[Title of District Court and Cause.]

Civil Action No. 7874-B

ANSWER AND COUNTERCLAIM

Defendant, Irvin W. Masters, Inc., for its answer to the Complaint of Plaintiff, The Parker Appliance Company, avers as follows:

1.

Defendant is without knowledge or information sufficient to form a belief as to the truth of the allegations contained in Paragraph I of the Complaint and therefore denies them.

2.

Defendant admits the allegations contained in Paragraph II of the Complaint.

3.

Defendant admits that this suit arises under the patent laws of the United States predicated upon Patent No. 2,212,183 but denies right of the Plaintiff to an injunction, an accounting of profits and an award of damages.

4.

Defendant denies the allegations of Paragraph IV of the Complaint, except the allegation that application for said Letters Patent were filed.

5.

Defendant admits the allegations of Paragraph V of the Complaint.

6.

Defendant admits the allegations of Paragraph VI of the Complaint.

7.

Defendant is without knowledge and information sufficient to form a belief as to the truth of the allegations contained in Paragraph VII and therefore denies each and every allegation contained therein.

8.

Defendant is without knowledge and information sufficient to form a belief as to the truth of allegations contained in Paragraph VIII of the Complaint and therefore denies said allegations and leaves the Plaintiff to its proofs.

9.

Defendant denies the allegations of Paragraph IX of the Complaint.

10.

Defendant denies the allegation of Paragraph X of the Complaint except that it acknowledges receipt of written notice of infringement.

11.

Defendant denies each and every allegation contained in Paragraph XI of the Complaint.

12.

Defendant denies each and every allegation of Paragraph XII of the Complaint.

As a Further and Affirmative Defense to Said Complaint Defendant Avers:

13.

That on information and belief that said patent No. 2,212,183 is invalid and void for the reason that the alleged invention thereof attempted to be patented therein, and every material and substantial part thereof had long prior to the alleged invention or discovery thereof by Arthur L. Parker or more than two years prior to the filing of the application for said patent in suit, been patented, described and contained in patents numbered and dated as follows:

| | | |
|----------------------|-----------|------------|
| W. N. Abbott | 46,603 | 2/28/1865 |
| G. H. Buzzell | 177,686 | 5/23/1876 |
| H. Guyer | 182,435 | 9/19/1876 |
| H. Guyer | 196,084 | 10/16/1877 |
| R. McConnell | 290,446 | 12/18/1883 |
| F. George | 326,425 | 9/15/1885 |
| I. B. Potts | 406,060 | 7/ 2/1889 |
| J. Anderson | 535,236 | 3/ 5/1895 |
| L. F. Jordan | 654,735 | 7/31/1900 |
| W. R. Park | 739,707 | 9/22/1903 |
| J. J. Dossert | 772,136 | 10/11/1904 |
| F. W. Reed | 964,315 | 7/12/1910 |
| S. L. Brown | 1,058,542 | 4/ 8/1913 |
| A. W. Bachmann | 1,352,342 | 9/ 7/1920 |
| J. Benzion | 1,680,080 | 8/ 7/1928 |
| E. E. Hewitt | 1,820,020 | 8/25/1931 |
| A. L. Parker | 1,893,442 | 1/ 3/1933 |
| A. L. Parker | 1,977,241 | 10/16/1934 |

14.

That on information and belief said Arthur L. Parker was not the original, first and true inventor of the alleged inventions purported to be covered by said patent in suit No. 2,212,183 or of any material or substantial part thereof but that the same were disclosed prior to the alleged invention thereof or more than two years prior to the filing of the application for said patent in suit by said Arthur L. Parker in printed publications and among others in the specifications and drawings of said patents recited in paragraph 13 hereof and also in the following printed publication:

Pipes and Tubes

Their Construction and Jointing

by Philip R. Bjorling

London

Whittaker and Co.

White Hart Street, Paternoster Square

1902

Library of Congress No. TS 280 B 6

15.

That on information and belief Arthur L. Parker was not the original or first inventor or discoverer of any material or substantial part of the things included in said patent and that the same involved merely the exercise of mechanical skill and judgment in view of common knowledge and practice

in the art long prior to Arthur L. Parker's alleged inventions or more than two years prior to his application for said patent in suit.

16.

That, on information and belief, said patent in suit No. 2,212,183 is invalid and void for the reason that the alleged invention thereof and all of material and substantial parts thereof were invented by others, known to others, used by others or were in public use or on sale in the United States by persons or corporations, and employees and officers thereof prior to the alleged inventions by said Arthur L. Parker or more than two years prior to the filing of applications for said United States patent in suit No. 2,212,183, including, among others:

The Parker Appliance Company,

Cleveland, Ohio.

Irvin W. Masters,

Los Angeles, California.

17.

That, on information and belief, in view of the knowledge and practice of the art at and long prior to the dates of filing of applications for said patent in suit No. 2,212,183 there was required no invention whatsoever but only the ordinary skill of the art to which said alleged invention appertains and that said patent is consequently invalid and void.

18.

That, on information and belief, said patent in suit No. 2,212,183 does not describe the alleged invention as required by law in such full, clear, and exact terms as to enable any persons skilled in the art or science to which they appertain to make, employ, or use the same and does not point out and distinctly claim the parts or improvements claimed as the patentee's alleged invention as required by law and is therefore invalid.

19.

That, on information and belief, the disclosure of said patent No. 2,212,183 is inaccurate, misdescriptive and erroneous and was written to intentionally confuse and deceive the examiner and to secure the issue of a patent which is not truly portrayed in the description as required by law and the patent is therefore invalid.

20.

That Defendant has been diligent in ascertaining and setting forth herein instances of prior knowledge, invention use, publication and patenting of the alleged invention of patent in suit No. 2,212,183 and believing many further instances to exist Defendant prays leave to add the same by amendment or otherwise when ascertained.

Counterclaim of Defendant for Declaratory Relief

For its counterclaim for declaratory relief Defendant alleges:

21.

That this Court has jurisdiction of this counterclaim for the reason that the counterclaim is brought under a statute of the United States in such case made and provided to wit: the Federal Declaratory Judgment Act, Section 274D of the United States Judicial Code (Title 28, United States Code, Section 400) for a final judgment determining the rights and other legal relations of the parties and that this is an actual controversy between the parties arising in the Courts of the United States and because the controversy is one arising under the patent laws of the United States.

22.

That Plaintiff has been and now is asserting said patent in suit No. 2,212,183 against the Defendant and against Defendant's customers and Plaintiff further has alleged that it is entitled to an accounting by Defendant for the use and sale of couplings made in accordance with said patent and to an injunction against the further use and sale thereof in the United States as set forth in the Complaint herein and that Plaintiff asserts ownership in said patent in suit No. 2,212,183 and Defendant has not at any time or place infringed said patent in suit and is not now infringing the same, that said patent in suit is in fact wholly invalid and void and wholly invalid and void if alleged or construed to cover any couplings made, used or sold by the Defendant in support of which allegations Defendant repeats the allegations of Paragraphs 13 to 20, in-

clusive, of its Answer, but that nevertheless the Plaintiff has now charged this Defendant with alleged infringement of said Letters Patent No. 2,212,183 and has commenced this action for such alleged infringement, wherefore an actual controversy exists between the Defendant and the Plaintiff cognizable by this Court under the Federal Declaratory Act.

23.

That, upon information and belief, the following patents were duly issued to Arthur L. Parker:

Patent No. 1,893,442 for a Tube Coupling, issued to Arthur L. Parker January 3, 1933.

Patent No. 1,977,240 for a Tube Coupling, issued to Arthur L. Parker October 16, 1934.

Patent No. 2,212,183 for a Tube Coupling, issued to Arthur L. Parker August 20, 1940.

24.

That, upon information and belief the patents identified in Paragraph 23 have been assigned to the Plaintiff herein by an assignment executed December 23, 1943, and recorded in the Patent Office in Liber B-198, pages 4 and 5, as evidenced by a copy of said assignment on file in this case as Plaintiff's Exhibit 2.

25.

That each of said patents identified in Paragraph 23 hereof relate to and describe a tube coupling for coupling flared tubing and in each case describe and claim a coupling having three essential parts,

namely, a male part or body, a female part or nut, and a sleeve, said sleeve being identified in the patents as one section of the female part.

26.

That claims in each of the patents identified in Paragraph 23 hereof define a tube coupling including a body, a nut and a sleeve for coupling flared tubing, that Defendant is the manufacturer of a tube coupling for use on flared tubing consisting of a body, a nut and a sleeve and believes said tube coupling identified herein to be the coupling alleged by Plaintiff to infringe patent in suit No. 2,212,183.

27.

That, upon information and belief, Plaintiff, by its agents, officers, employees and other persons responsible for its actions has repeatedly and on many occasions openly and avowedly accused the Defendant of infringing each and every one of patents Nos. 1,893,442, 1,977,240 and 2,212,183 and all of the claims thereof.

28.

That, upon information and belief, Plaintiff, by its agents, officers, employees and other persons responsible for its actions has repeatedly and on many occasions openly accused Defendant's customers throughout the trade of infringing said patents Nos. 1,893,442, 1,977,240 and 2,212,183 because of use by said customers of couplings supplied by the Defendant.

29.

That Plaintiff, by its agents, officers, employees or other persons responsible for its actions specifically charged Defendant with infringement of each and all of patents Nos. 1,893,442, 1,977,240 and 2,212,183 to wit, on the 13th day of October, 1947, in the city of Los Angeles, California, and offered to withdraw charges of infringement of said patents Nos. 1,893,442, 1,977,240 and 2,212,183 and to refrain from suit thereon on condition that Defendant obligate itself upon a license contract for each and all of said patents Nos. 1,893,442, 1,977,240 and 2,212,183.

30.

That patent in suit No. 2,212,183 makes express reference to patents Nos. 1,893,442 and 1,977,240 in the first paragraph of said patent in suit and elsewhere and describes said patent in suit as only an improvement on said patents Nos. 1,893,442 and 1,977,240 and that said patents Nos. 1,893,442 and 1,977,240 being prior in date of application and date of issue contain claims which dominate and read upon the structure of said patent No. 2,212,183 in issue and are a perpetual threat against defendant's manufacture of three-piece couplings comprising a body, a nut and a sleeve to the same extent as patent No. 2,212,183 in suit.

31.

That, upon information and belief, Defendant is unable to determine the legal status of said patents

and whether or not by its manufacture, use and sale of a coupling comprising essentially a body, a nut and a sleeve it may be liable for infringement of any or all of said patents Nos. 1,893,442, 1,977,240 and 2,212,183, or that having been absolved of all charges with respect to patent in suit No. 2,212,183 it may still be liable for charges of infringement of either or both of patents Nos. 1,893,442 and 1,977,240; wherefore unless judgment is rendered with respect to validity and infringement of all of said patents Nos. 1,893,442, 1,977,240 and 2,212,183 in this action, Defendant will be faced with the possibility of numerous, frequent and multiple suits over an extended period of time which, if the issue respecting all said patents be tried at this time, could be disposed of in a single action.

32.

That, upon information and belief, all of said patents Nos. 1,893,442, 1,977,240 and 2,212,183 are invalid and void and of no force and effect for the reasons that the subject matter of all of said patents has been published in prior patents, prior publications and has been made the subject matter of prior public use in each and every case more than two years prior to the date of application of each and all of said patents, that prior publication and use applicable against patent in issue is equally applicable against said patents Nos. 1,893,442 and 1,977,240, and in support therefore Defendant repeats the allegations of Paragraphs 13 through 20, inclusive, of the Answer herein as being applicable

to patent No. 1,893,442 and 1,977,240 to the same extent to which said allegations are applicable against patent No. 2,212,183 in suit, which Paragraphs 13 to 20, inclusive, are hereby incorporated by reference into this counterclaim and made a part thereof.

33.

That, upon information and belief, no coupling manufactured, used or sold by Defendant infringes any of said patents Nos. 1,893,442, 1,977,240 and 2,212,183 or any claims thereof and because of said non-infringement Plaintiff has no right to make charges of infringement against Defendant, its customers, or any other persons using couplings supplied by Defendant.

34.

That by reason of Plaintiff's acts in asserting claims under said patents Nos. 1,893,442, 1,977,240 and 2,212,183 Defendant has been greatly damaged in its business, its trade relations and its reputation to an extent which cannot at this time be readily ascertained.

Wherefore Defendant prays:

With Respect to the Answer

1. That the patent in suit be declared invalid.
2. That the patent in suit be declared not infringed.
3. That the Complaint be dismissed with respect to the Defendant with prejudice.

4. That the Defendant be awarded attorneys fees.

5. That the Defendant be awarded damages, costs and such other and further relief as may be required; and

With Respect to the Counterclaim

6. That Plaintiff be required to reply to the Counterclaim.

7. That this Honorable Court declare, adjudge and decree that said patents Nos. 1,893,442, 1,977,240 and 2,212,183, and each of them, have not been infringed by the Defendant nor by any of its customers or others in the trade using couplings supplied by the Defendant.

8. That judgment be signed and entered by this Honorable Court declaring and adjudging that said patents Nos. 1,893,442, 1,977,240 and 2,212,183 and each of them, are wholly invalid and void as to each and all of the claims thereof, and dismissing the Complaint herein with costs of the Defendant to be taxed against the Plaintiff and that such interlocutory relief be granted to the Defendant by a stay, preliminary injunction or otherwise as to this Honorable Court shall seem meet and proper.

9. That this Honorable Court shall declare, adjudge and decree that each of said patents Nos. 1,893,442, 1,977,240 and 2,212,183 is wholly invalid and void as to each and every claim thereof.

10. That this Honorable Court, declare, adjudge and decree that it is the right of the Defendant to continue the manufacture, use and sale of couplings

embodying constructions the same as and similar to those herein complained of without actions, threats, molestation or interference of any character whatsoever by or from the Plaintiff or its assigns or anyone claiming through or under it on account of patents Nos. 1,893,442, 1,977,240 and 2,212,183, or any of them or on any alleged invention thereof.

11. That this Honorable Court issue a perpetual injunction and a preliminary injunction during the pendency of this action enjoining and restraining the Plaintiff, its agents, officers, associates, confederates and assigns forever from further asserting, contending, claiming or representing, orally, in writing, or otherwise, that said patents Nos. 1,893,442, 1,977,240 and 2,212,183, or any of them, or any of the claims thereof or any purport of invention thereof, have been or are now being infringed by the Defendant, its customers or others using couplings supplied by the Defendant.

12. That this Honorable Court issue a perpetual injunction and a preliminary injunction during the pendency of this action enjoining and restraining the Plaintiff, its agents, officers, associates, confederates and assigns forever from threatening to sue or suing for alleged infringements thereof Defendant or any customer of the Defendant or other person using couplings supplied by the Defendant and from in any manner unfairly or improperly interfering with the Defendant's continued manufacture, use and sale of couplings or the free and undisturbed conduct of the Defendant's business.

13. That damages be awarded Defendant payable by Plaintiff for all acts charged in this counterclaim.

14. That damages in treble the amount be awarded to Defendant payable by Plaintiff for wilfully and wantonly and flagrantly asserting invalid patents against Defendant's customers on a widespread scale throughout the industry and damaging Defendant in its business and trade relations to a great extent which at this time is not readily ascertainable.

15. That Defendant be awarded its attorney's fees accruing by reason of this counterclaim.

16. That the costs of this action predicated upon this counterclaim be taxed against the Plaintiff in favor of the Defendant and that Defendant have judgment and execution therefor against the Plaintiff.

17. For such other and further relief as to this Honorable Court may seem right and proper.

HUEBNER, MALTBY &
BEEHLER,

VERNON D. BEEHLER, and
HERBERT A. HUEBNER,

By /s/ VERNON D. BEEHLER,
Attorneys for Defendant.

GLENN A. LANE,
Of Counsel.

[Endorsed]: Filed February 17, 1948.

[Title of District Court and Cause.]

Civil Action No. 7874-B

REPLY

Plaintiff, The Parker Appliance Company, for its reply to the Counterclaim of the Defendant, Irvin W. Masters, Inc., avers as follows:

1.

Plaintiff, as to paragraph 21 of Defendant's Counterclaim, admits that this Court has jurisdiction of actual controversies, under Title 28, United States Code, Section 400, arising under the patent laws of the United States; and admits that there is a controversy with respect to Patent No. 2,212,183, which patent is in suit by virtue of the Plaintiff's Complaint in this cause; and Plaintiff denies that any other actual controversy exists between Defendant and Plaintiff cognizable by this Court.

2.

Plaintiff, as to paragraph 22 of Defendant's Counterclaim, admits that it has asserted, and now asserts, its patent No. 2,212,183 against the Defendant; admits that it has brought this suit charging Defendant with infringement of its patent No. 2,212,183; and Plaintiff denies that it has asserted said patent No. 2,212,183 against Defendant's customers, and denies each and every other allegation of said paragraph.

3.

Plaintiff, as to paragraph 23 of Defendant's Counterclaim, admits the issue of Parker patent No. 1,893,442, Parker patent No. 1,977,240 and Parker patent No. 2,212,183 on the respective dates set forth in said paragraph.

4.

Plaintiff, as to paragraph 24 of Defendant's Counterclaim, admits that the patents, identified in paragraph 23 of Defendant's Counterclaim and referred to in paragraph 3 hereof, have been assigned to Plaintiff as set forth in Plaintiff's Exhibit 2.

5.

Plaintiff, as to paragraph 25 of Defendant's Counterclaim, admits that the three above-referred to Parker patents illustrate and relate to a three-piece tube coupling, except, however, that each patent differs from the other as to the three-piece tube coupling and differ as set forth in the claims of each patent; and, as to all of the other allegations contained in said paragraph, Plaintiff denies the same.

6.

Plaintiff, as to paragraph 26 of Defendant's Counterclaim, admits that the claims of each of the above identified Parker patents are directed to a particular construction and arrangement, including a body, a nut and a sleeve for coupling flared tubing; and admits that Defendant's tube coupling charged to infringe consists of a particular construction and

arrangement, including a body, a nut and a sleeve for coupling flared tubing; and avers that said Defendant's body, nut and sleeve embody the construction and arrangement of such parts with respect to each other to obtain the complete benefits and advantages embodied in each of the three claims of patent No. 2,212,183; and, as to all other allegations in said paragraph, Plaintiff denies the same.

7.

Plaintiff, as to paragraph 27 of Defendant's Counterclaim, denies the allegations therein contained with respect to patents Nos. 1,893,442 and 1,977,240; and admits notice of infringement of Plaintiff's patent in suit No. 2,212,183 by written document dated July 19, 1946, a copy of which is attached hereto, by reference made a part hereof, marked Plaintiff's Exhibit 3; and avers that Defendant acknowledged said notice, Plaintiff's Exhibit 3, by written document dated July 22, 1946, a copy of which is hereto attached, by reference made a part hereof, marked Plaintiff's Exhibit 4.

8.

Plaintiff, as to paragraph 28 of Defendant's Counterclaim, denies each and every allegation therein contained.

9.

Plaintiff, as to paragraph 29 of Defendant's Counterclaim, denies that on the 13th day of October, 1947, Defendant was charged with infringement of

patents Nos. 1,893,442, 1,977,240 and 2,212,183; and denies that it offered to withdraw the charge of infringement and refrain from suit on condition that Defendant take a license under said three patents; and denies that suit was threatened at that time, or at any other time; and Plaintiff avers that a conference was had in the City of Los Angeles with the President of this Defendant and its attorney on October 15, 1947, looking toward a settlement of differences in accordance with the written document dated July 19, 1946, Plaintiff's Exhibit 3.

10.

Plaintiff, as to paragraph 30 of Defendant's Counterclaim, admits that the patent in suit No. 2,212,183 makes reference to patents Nos. 1,893,442 and 1,977,240 as exemplifying that for which the patent in suit is an improvement on; and denies that the reference to patents Nos. 1,893,442 and 1,977,240 in the patent in suit constitutes, directly or indirectly, any threat against this Defendant with respect to said patents Nos. 1,893,442 and 1,977,240; and Plaintiff avers that reference to patents Nos. 1,893,442 and 1,977,240 in the patent suit is notice to the world and to this Defendant that the claims of the patent in suit No. 2,212,183 specifically differ from and cover an improvement over the two patents therein referred to.

11.

Plaintiff, as to paragraph 31 of Defendant's Counterclaim, denies that it has charged Defendant with infringement of any claims of patent No. 1,893,442 or patent No. 1,977,240, and denies that there is any threat or likelihood of a multiplicity of suits;

Plaintiff avers that it has never asserted said patents Nos. 1,893,442 and 1,977,240 against Defendant; and Plaintiff denies that any controversy exists in fact within the meaning of Title 28, United States Code, Section 400 with respect to said patents Nos. 1,893,442 and 1,977,240, and, as to all other allegations contained in said paragraph, Plaintiff denies the same.

12.

Plaintiff, as to paragraph 32 of Defendant's Counterclaim, denies that patents Nos. 1,893,442, 1,977,240 and 2,212,183 are invalid for any of the reasons set forth in paragraphs 13 to 20, inclusive, of Defendant's Answer, and denies specifically that there is any controversy with respect to patent Nos. 1,893,442 and 1,977,240; and Plaintiff avers that any controversy with respect to patent No. 2,212,183 between Plaintiff and Defendant is already in issue by the Complaint on file and Defendant's Answer thereto.

13.

Plaintiff, as to paragraph 33 of Defendant's Counterclaim, denies the allegations with respect to its patent No. 2,212,183 and avers that, as to patents Nos. 1,893,442 and 1,977,240, there is no controversy in fact between Plaintiff and Defendant.

14.

Plaintiff, as to paragraph 34 of Defendant's Counterclaim, denies that it has asserted patents Nos. 1,893,442 and 1,977,240 against Defendant and therefore, denies that Defendant has been damaged in any manner; and Plaintiff avers that its assertion against Defendant of its patent No. 2,212,183 is as

alleged in its Complaint; and Plaintiff denies any damage to Defendant because of Plaintiff asserting its patent No. 2,212,183 and the bringing of this suit thereunder.

Wherefore Plaintiff Prays:

With Respect to the Counterclaim

1. That as to patents Nos. 1,893,442 and 1,977,240, it be dismissed.

2. That this Court hold that there is no controversy in fact as between Plaintiff and Defendant involving said patents Nos. 1,893,442 and 1,977,240.

3. That Defendant is not entitled to any of the relief requested.

4. That this Court, with respect to patent No. 2,212,183 decree that said patent is valid and has been infringed by Defendant in its manufacture and sale of tube couplings, as set forth in Plaintiff's Complaint on file.

5. That Plaintiff be awarded attorney's fees.

6. That Plaintiff have such further relief as to this Honorable Court may seem proper and just.

LYON & LYON,

LEONARD S. LYON,

CHARLES G. LYON,

WILL FREEMAN,

By /s/ CHARLES G. LYON,

Attorneys for Plaintiff.

PLAINTIFF'S EXHIBIT No. 3

(Copy)

July 19, 1946

Irvin W. Masters, Inc.
3035 Andrita Street
Los Angeles 41, California

Mr. Irvin W. Masters

Gentlemen:

Our Company, as you know, is the owner of Parker Patent No. 2,212,183, as well as other patents having to do with flared fittings. We have examined flared fittings manufactured by your company and in the opinion of our patent counsel they are an infringement of our Patent 2,212,183.

You perhaps know that during the national emergency and war period The Parker Appliance Company liberally granted letters of permission to airplane manufacturers for the use of Parker-owned or controlled patents. The emergency period having terminated, our Company withdrew such letters of permission. We know that you will want to check into the situation and determine for yourself the question of infringement.

Our Company is not adverse to considering granting licenses to reputable manufacturers who make good products.

This letter is not written in the spirit of a threat of infringement but in the nature of an invitation for you to consider the possibility of a license under our patents where such patents do cover the flared fittings made by your company.

We shall be glad to hear from you at your convenience.

Very truly yours,

THE PARKER APPLIANCE
COMPANY,

Vice President.

C. H. Wagner, Jr/ht

PLAINTIFF'S EXHIBIT No. 4

(Copy)

Irvin W. Masters, Inc.

3035 Andrita Street

Los Angeles 41, California

July 22, 1946

M-33295

The Parker Appliance Company

17325 Euclid Avenue

Cleveland 12, Ohio.

Attention: Mr. C. H. Wagner, Jr.

Gentlemen:

We have your letter of July 19, 1946, calling attention to your Patent No. 2,212,183 and we note that it is the opinion of your patent counsel that we are infringing this patent and other flared tube fitting patents which you hold.

We are writing to ask that you advise specifically what other patents you consider we are infringing and if you care to state, wherein you think we are infringing.

In general we have, after many years' experience with this entire fitting situation become quite thoroughly convinced that all of these fitting patents are just about as thin as soup made out of the shadow of a chicken starved to death. However, we are willing to approach the question in the spirit indicated in the next to last paragraph of your letter, without antagonism and in a spirit of cooperation.

The writer was quite well acquainted with the late Mr. A. L. Parker and held him personally, and the work he did in very high esteem. Regardless of the merit or lack of merit in the patent situation I think that Mr. Parker and the Parker Appliance Company did much in this particular field for which recognition must be given.

Kindly advise us more particularly in reference to the other patents and points involved and we will give it our consideration.

Yours very truly,

/s/ IRVIN W. MASTERS,
President.

[Endorsed]: Filed March 16, 1948.

In the District Court of the United States, Southern
District of California, Central Division

Civil Action No. 8023-W

THE PARKER APPLIANCE COMPANY,

Plaintiff,

vs.

JOSEPH C. COLLINS, doing business under firm
name and style of Collins Engineering Co.,
Hollywood, California,

Defendant.

COMPLAINT FOR INFRINGEMENT OF
UNITED STATES LETTERS PATENT No.
2,212,183

To: The Honorable Judges, of the United States
District Court, in and for the Southern Dis-
trict of California, Central Division, Ninth
Circuit.

Plaintiff, The Parker Appliance Company, of
Cleveland, Ohio, for its complaint against Joseph
C. Collins, doing business under firm name and
style of Collins Engineering Co., of Hollywood,
California, Defendant, alleges:

1.

Plaintiff, The Parker Appliance Company, is a
corporation organized under and existing by virtue
of the laws of the State of Ohio and has its prin-

incipal office and place of business in the City of Cleveland, in the County of Cuyahoga and State of Ohio, and has a regular and established place of business in the City of Los Angeles, in the County of Los Angeles and State of California.

2.

Defendant, Joseph C. Collins, is a resident of the State of California, and does business under the firm name and style, Collins Engineering Co., and has a place of business in the City of Hollywood, in the County of Los Angeles, and State of California, within the Southern District of California, Central Division.

3.

This is a suit arising under the Patent Laws of the United States for infringement of United States Letters Patent issued to Arthur L. Parker, of Cleveland, Ohio, No. 2,212,183, dated August 20, 1940, upon an application filed March 2, 1938, and Plaintiff seeks the equitable remedy of an injunction and asks for an accounting of profits and an award for damages.

4.

On March 2, 1938, Arthur L. Parker, being the first, original and sole inventor of Certain Improvements in Tubing Coupling, filed in the United States Patent Office, his application for Letters Patent thereon, Serial No. 193,569.

5.

On August 20, 1940, United States Letters Patent No. 2,212,183 for said invention were duly issued to said Arthur L. Parker. A copy of said Parker Patent No. 2,212,183 is attached hereto and marked "Plaintiff's Exhibit 1."

6.

By written instrument, dated December 28, 1943, and duly recorded in Liber B-198, page 4, of the Transfers of Patents of the United States Patent Office, on December 30, 1943, said Arthur L. Parker assigned his entire right, title and interest in and to said invention and in and to said Letters Patent No. 2,212,183, together with all claims and demands in law or equity for possible infringement of said patent, to The Parker Appliance Company of Cleveland, Ohio. A copy of said Assignment is hereto attached and marked "Plaintiff's Exhibit 2."

7.

The aforesaid invention of said Letters Patent No. 2,212,183 is of great utility and value and a large number of Tube Couplings, embodying the invention of said Letters Patent, have been manufactured and sold by Plaintiff, and licensees of the Plaintiff; and said invention is of great benefit and advantage to the public; and subsequent to the issue of said Letters Patent manufacturers of Tube Couplings have acknowledged and acquiesced in said Letters Patent.

8.

Under date of October 16, 1947, licenses were granted by Plaintiff to the Pacific Screw Products Corporation, of Southgate, California, and the Deutsch Company, of Los Angeles, California, under said Letters Patent No. 2,212,183.

9.

During World War II millions of said Tube Couplings, embodying the invention of said Letters Patent No. 2,212,183, were used by the Armed Forces of the United States, and Plaintiff made the invention of said Letters Patent available to the United States free of any royalty or any claim.

10.

Defendant, Joseph C. Collins, doing business under the firm name and style, Collins Engineering Co., has had full knowledge of said Letters Patent No. 2,212,183 and his infringement of said Letters Patent, and the Plaintiff has given written notice of said infringement to Defendant.

11.

Defendant, since the issue of said letters Patent, and within six years prior to the filing of this complaint, unlawfully and without license has infringed said Letters Patent and Plaintiff's rights thereunder by making, using, selling, and offering to sell Tube Couplings, embodying the invention of said Letters Patent, and Defendant has caused and is

causing others to infringe said Letters Patent by using Tube Couplings of its manufacture; and by so infringing said Letters Patent, Defendant has realized and received gains and profits which otherwise would have been received by Plaintiff.

12.

Defendant is continuing and threatens to continue the infringing acts herein complained of and by reason of said infringement and continued threats of infringement, Plaintiff has been greatly damaged and the injury is irreparable and for such injury and damage Plaintiff has no adequate remedy at law.

Wherefore, Plaintiff prays:

1. That a decree be signed and entered by this Honorable Court holding, declaring and adjudging that Arthur L. Parker is the true, first, sole and original inventor of the invention set forth and described in said Letters Patent No. 2,212,183 and of all material and substantial parts thereof; and that the entire right, title and interest in and to the invention of said Letters Patent No. 2,212,183 is vested in the Plaintiff, The Parker Appliance Company, and that Defendant has infringed upon the claims thereof.

2. That this Honorable Court award a permanent injunction and a preliminary injunction during the pendency of this suit restraining and enjoining the Defendants, his agents, attorneys, servants, employees and all others acting by and under

his direction and authority, from manufacturing or causing to be manufactured, from using or causing to be used, from selling or causing to be sold Tube Couplings made in accordance with and embodying the invention of said Parker Patent No. 2,212,183, and from infringing upon or violating the invention of said Letters Patent in any way whatsoever.

3. That an accounting be awarded to Plaintiff of Defendant's profits, gains and advantages and the damages sustained by Plaintiff because of Defendant's infringement upon said Letters Patent.

4. That Defendant be required to pay the costs of this suit.

5. That Plaintiff have such other and further relief as is just.

THE PARKER APPLIANCE
COMPANY

By /s/ C. H. WAGNER, JR.,
Vice-President.

/s/ LEONARD S. LYON,

/s/ CHARLES G. LYON,

/s/ WILL FREEMAN,

Of Counsel for Plaintiff.

State of Ohio,
County of Cuyahoga—ss.

C. H. Wagner, Jr., being duly sworn, deposes and says that he is Vice-President of The Parker Appliance Company, Plaintiff in the foregoing Complaint; that he has read the said Complaint and that the facts therein stated are true of his own knowledge, except as to the facts which may be stated on information and belief and as to those facts he believes them to be true; and that the reason why this verification is not made by said The Parker Appliance Company personally, is that said The Parker Appliance Company is a corporation, of which affiant is a duly qualified officer.

/s/ C. H. WAGNER, JR.

Subscribed and sworn to before me, a Notary Public in and for said County and State, this 25th day of February, 1948.

/s/ HELEN A. HORNYAK,
Notary Public.

My Commission Expires Jan. 15, 1951.

PLAINTIFF'S EXHIBIT No. 1

Patent No. 2,212,183—A. L. Parker

[See page 1323 Volume ~~III~~^{IV}, Book of Exhibits.]

PLAINTIFF'S EXHIBIT No. 2

Assignment

[See page 1327 Volume ~~III~~^{IV}, Book of Exhibits.]

[Endorsed]: Filed Mar. 4, 1948.

[Title of District Court and Cause.]

Civil Action No. 8023-W

ANSWER

Defendant, Joseph C. Collins, for his answer to the Complaint of Plaintiff, The Parker Appliance Company, avers as follows:

1.

Defendant is without knowledge or information sufficient to form a belief as to the truth of the allegations contained in Paragraph 1 of the Complaint and therefore denies them.

2.

Defendant admits the allegations contained in Paragraph 2 of the Complaint.

3.

Defendant admits that this suit arises under the patent laws of the United States predicated upon Patent No. 2,212,183 but denies right of the Plaintiff to an injunction, an accounting of profits and award of damages.

4.

Defendant denies the allegations of Paragraph 4 of the Complaint, except the allegation that application for said Letters Patent were filed.

5.

Defendant admits issue of United States Letters Patent No. 2,212,183 on August 20, 1940, to Arthur L. Parker but denies that said issue was lawful.

6.

Defendant admits the allegations of Paragraph 6 of the Complaint.

7.

Defendant is without knowledge and information sufficient to form a belief as to the truth of allegations contained in Paragraph 7 and therefore denies each and every allegation contained therein.

8.

Defendant is without knowledge and information sufficient to form a belief as to the truth of allegations contained in Paragraph 8 of the Complaint and therefore denies said allegations and leaves the Plaintiff to its proofs.

9.

Defendant denies the allegations of Paragraph 9 of the Complaint.

10.

Defendant denies the allegations of Paragraph 10 of the Complaint except that it acknowledges receipt of wirtten notice of infringement.

11.

Defendant denies each and every allegation contained in Paragraph 11 of the Complaint.

12.

Defendant denies each and every allegation of Paragraph 12 of the Complaint.

As a Further and Affirmative Defense to Said Complaint Defendant Avers:

13.

That on information and belief said patent No. 2,212,183 is invalid and void for the reason that the alleged invention thereof attempted to be patented therein, and every material and substantial part thereof had long prior to the alleged invention or discovery thereof by Arthur L. Parker or more than two years prior to the filing of the application for said patent in suit, been patented, described and contained in patents numbered and dated as follows:

| | | |
|----------------|-----------|------------|
| W. N. Abbott | 46,603 | 2/28/1865 |
| G. H. Buzzell | 177,686 | 5/23/1876 |
| H. Guyer | 182,435 | 9/19/1876 |
| H. Guyer | 196,084 | 10/16/1877 |
| R. McConnell | 290,446 | 12/18/1883 |
| F. George | 326,425 | 9/15/1885 |
| I. B. Potts | 406,060 | 7/ 2/1889 |
| J. Anderson | 535,236 | 3/ 5/1895 |
| L. F. Jordan | 654,735 | 7/31/1900 |
| W. R. Park | 739,707 | 9/22/1903 |
| J. J. Dossert | 772,136 | 10/11/1904 |
| F. W. Reed | 964,315 | 7/12/1910 |
| S. L. Brown | 1,058,542 | 4/ 8/1913 |
| A. W. Bachmann | 1,352,342 | 9/ 7/1920 |
| J. Benzion | 1,680,080 | 8/ 7/1928 |
| E. E. Hewitt | 1,820,020 | 8/25/1931 |
| A. L. Parker | 1,893,442 | 1/ 3/1933 |
| A. L. Parker | 1,977,241 | 10/16/1934 |

14.

That on information and belief said Arthur L. Parker was not the original, first and true inventor of the alleged inventions purported to be covered by said patent in suit no. 2,212,183 or of any material or substantial part thereof but that the same were disclosed prior to the alleged invention thereof or more than two years prior to the filing of the application for said patent in suit by said Arthur L. Parker in printed publications and among others in the specifications and drawings of said patents recited in Paragraph 13 hereof and also in the following printed publication:

Pipes and Tubes

Their Construction and Jointing

by Philip R. Bjorling

London

Whittaker and Co.

White Hart Street, Paternoster Square

1902

Library of Congress No. TS 280 B 6

15.

That on information and belief Arthur L. Parker was not the original or first inventor or discoverer of any material or substantial part of the things included in said patent and that the same involved merely the exercise of mechanical skill and judg-

ment in view of common knowledge and practice in the art long prior to Arthur L. Parker's alleged inventions or more than two years prior to his application for said patent in suit.

16.

That, on information and belief, said patent in suit No. 2,212,183 is invalid and void for the reason that the alleged invention thereof and all of material and substantial parts thereof were invented by others, known to others, used by others or were in public use or on sale in the United States by persons or corporations, and employees and officers thereof prior to the alleged inventions by said Arthur L. Parker or more than two years prior to the filing of applications for said United States patent in suit No. 2,212,183, including, among others:

The Parker Appliance Company,

Cleveland, Ohio.

Irvin W. Masters,

Los Angeles, California.

17.

That, on information and belief, in view of the knowledge and practice of the art at and long prior to the dates of filing of application for said patent in suit No. 2,212,183, there was required no invention whatsoever, but only the ordinary skill of the art to which said alleged invention appertains and that said patent is consequently invalid and void.

18.

That, on information and belief, said patent in suit No. 2,212,183 does not describe the alleged invention as required by law in such full, clear, and exact terms as to enable any persons skilled in the art or science to which they appertain to make, employ, or use the same and does not point out and distinctly claim the parts or improvements claimed as the patentee's alleged invention as required by law and is therefore invalid.

19.

That, on information and belief, the disclosure of said patent No. 2,212,183 is inaccurate, misdescriptive and erroneous and was written to intentionally confuse and deceive the examiner and to secure the issue of a patent which is not truly portrayed in the description as required by law and the patent is therefore invalid.

20.

That Defendant has been diligent in ascertaining and setting forth herein instances of prior knowledge, invention, use, publication and patenting of the alleged invention of patent in suit No. 2,212,183, and believing many further instances to exist Defendant prays leave to add the same by amendment or otherwise when ascertained.

Counterclaim of Defendant for
Declaratory Relief

For its counterclaim for declaratory relief Defendant alleges:

21.

That this Court has jurisdiction of this counterclaim for the reason that the counterclaim is brought under a statute of the United States in such case made and provided, to wit: the Federal Declaratory Judgment Act, Section 274D of the United States Judicial Code (Title 28, United States Code, Section 400), for a final judgment determining the rights and other legal relations of the parties, and that this is an actual controversy between the parties arising in the Courts of the United States and because the controversy is one arising under the patent laws of the United States.

22.

That Plaintiff has been and now is asserting said patent No. 2,212,183 against the Defendant and against Defendant's customers and Plaintiff further has alleged that it is entitled to an accounting by Defendant for the use and sale of couplings made in accordance with said patent and to an injunction against the further use and sale thereof in the United States as set forth in the Complaint herein and that Plaintiff asserts ownership in said patent No. 2,212,183 and Defendant has not at any time or place infringed said patent No. 2,212,183 and is

not now infringing the same, that said patent No. 2,212,183 is in fact wholly invalid and void and wholly invalid and void if alleged or construed to cover any couplings made, used or sold by the Defendant in support of which allegations Defendant repeats the allegations of Paragraphs 13 to 20, inclusive, of its Answer, but that nevertheless the Plaintiff has now charged this Defendant with alleged infringement of said Letters Patent No. 2,212,183 and has commenced this action for such alleged infringement, wherefore an actual controversy exists between the Defendant and the Plaintiff cognizable by this Court under the Federal Declaratory Act.

23.

That, upon information and belief, the following patents were duly issued to Arthur L. Parker:

Patent No. 1,893,442 for a Tube Coupling, issued to Arthur L. Parker January 3, 1933.

Patent No. 1,977,240 for a Tube Coupling, issued to Arthur L. Parker October 16, 1934.

Patent No. 2,212,183 for a Tube Coupling, issued to Arthur L. Parker August 20, 1940.

24.

That, upon information and belief, the patents identified in Paragraph 23 have been assigned to the Plaintiff herein by an assignment executed December 23, 1943, and recorded in the Patent Office in Liber B-198, pages 4 and 5, as evidenced by a copy of such assignment on file in this case as Plaintiff's Exhibit 2.

25.

That each of said patents identified in Paragraph 23 hereof relate to and describe a tube coupling for coupling flared tubing and in each case describes and claim a coupling having three essential parts, namely, a male part or body, a female part or nut, and a sleeve, said sleeve being identified in the patents as one section of the female part.

26.

That claims in each of the patents identified in Paragraph 23 hereof define a tube coupling including a body, a nut and a sleeve for coupling flared tubing, that Defendant is the manufacturer of a tube coupling for use on flared tubing consisting of a body, a nut and a sleeve and believes said tube coupling identified herein to be the coupling alleged by Plaintiff to infringe patent No. 2,212,183.

27.

That, upon, information and belief, Plaintiff, by its agents, officers, employees and other persons responsible for its actions has repeatedly and on many occasions openly and avowedly accused couplings manufactured and sold by Defendant as being infringements of each and every one of patents Nos. 1,893,442, 1,977,240 and 2,212,183 and all of the claims thereof.

28.

That, upon information and belief, Plaintiff, by its agents, officers, employees and other persons re-

sponsible for its actions has repeatedly and on many occasions openly accused Defendant's customers throughout the trade of infringing said patents Nos. 1,893,442, 1,977,240 and 2,212,183 because of use by said customers of couplings supplied by the Defendant.

29.

That patent No. 2,212,183 makes express reference to patents Nos. 1,893,442 and 1,977,240 in the first paragraph of said patent No. 2,212,183 and elsewhere and describes said patent No. 2,212,183 as only an improvement on said patents Nos. 1,893,442 and 1,977,240.

30.

That patent No. 1,893,442, being prior in date of application and date of issue, contains only one claim and that said one claim may be construed to read upon the structure of said patent No. 2,212,183.

31.

That patent No. 1,977,240, being prior in date of application and date of issue, contains claims, one or both of which may be construed to read upon the structure of said patent No. 2,212,183.

32.

That patents Nos. 1,893,442 and 1,977,240 are a perpetual threat against defendant's manufacture of three-piece couplings comprising a body, a nut and a sleeve.

33.

That, upon information and belief, Defendant is unable to determine the legal status of said patents and whether or not by its manufacture, use and sale of a coupling comprising essentially a body, a nut and a sleeve it may be liable for infringement of any or all of said patents Nos. 1,893,442, 1,977,240 and 2,212,183, or that having been absolved of all charges with respect to patent in suit No. 2,212,183 it may still be liable for charges of infringement of either or both of patents Nos. 1,893,442 and 1,977,240; wherefore unless judgment is rendered with respect to validity and infringement of all of said patents Nos. 1,893,442, 1,977,240 and 2,212,183 in this action, Defendant will be faced with the possibility of numerous, frequent and multiple suits over an extended period of time which, if the issue respecting all said patents be tried at this time, could be disposed of in a single action.

34.

That, upon information and belief, all of said patents Nos. 1,893,442, 1,977,240 and 2,212,183 are invalid and void and of no force and effect for the reasons that the subject matter of all of said patents has been published in prior patents, prior publications and has been made the subject matter of prior public use in each and every case more than two years prior to the date of application of each and all of said patents, that prior publication and use applicable against patent No. 2,212,183 is

equally applicable against said patents Nos. 1,893,442 and 1,977,240, and in support therefor Defendant repeats the allegations of Paragraphs 13 through 20, inclusive, of the Answer herein as being applicable to patents Nos. 1,893,442 and 1,977,240 to the same extent to which said allegations are applicable against patent No. 2,212,183, which Paragraphs 13 to 20, inclusive, are hereby incorporated by reference into this counterclaim and made a part thereof.

35.

That, upon information and belief, no coupling manufactured, used or sold by Defendant infringes any of said patents Nos. 1,893,442, 1,977,240 and 2,212,183 or any claims thereof and because of said non-infringement Plaintiff has no right to make charges of infringement against Defendant, its customers, or any other persons using couplings supplied by Defendant.

36.

That by reason of Plaintiff's acts in asserting claims under said patents Nos. 1,893,442, 1,977,240 and 2,212,183 Defendant has been greatly damaged in its business, its trade relations and its reputation to an extent which cannot at this time be readily ascertained.

Wherefore Defendant Prays:

With Respect to the Answer

1. That the patent in suit be declared invalid.

2. That the patent in suit be declared not infringed.

3. That the Complaint be dismissed with respect to the Defendant with prejudice.

4. That the Defendant be awarded attorneys' fees.

5. That the Defendant be awarded damages, costs and such other and further relief as may be required; and

With Respect to the Counterclaim

6. That Plaintiff be required to reply to the Counterclaim.

7. That this Honorable Court declare, adjudge and decree that said patents Nos. 1,893,442, 1,977,240 and 2,212,183, and each of them, have not been infringed by the Defendant nor by any of its customers or others in the trade using couplings supplied by the Defendant.

8. That judgment be signed and entered by this Honorable Court declaring and adjudging that said patents Nos. 1,893,442, 1,977,240 and 2,212,183 and each of them, are wholly invalid and void as to each and all of the claims thereof, and dismissing the Complaint herein with costs of the Defendant to be taxed against the Plaintiff and that such interlocutory relief be granted to the Defendant by a stay, preliminary injunction or otherwise as to this Honorable Court shall seem meet and proper.

9. That this Honorable Court shall declare, adjudge and decree that each of said patents Nos. 1,893,442, 1,977,240 and 2,212,183 is wholly invalid and void as to each and every claim thereof.

10. That this Honorable Court declare, adjudge and decree that it is the right of the Defendant to continue the manufacture, use and sale of couplings embodying constructions the same as and similar to those herein complained of without actions, threats, molestation or interference of any character whatsoever by or from the Plaintiff or its assigns or anyone claiming through or under it on account of patents Nos. 1,893,442, 1,977,240 and 2,212,183, or any of them or on any alleged invention thereof.

11. That this Honorable Court issue a perpetual injunction and a preliminary injunction during the pendency of this action enjoining and restraining the Plaintiff, its agents, officers, associates, confederates and assigns forever from further asserting, contending, claiming or representing, orally, in writing, or otherwise, that said patents Nos. 1,893,442, 1,977,240 and 2,212,183, or any of them, or any of the claims thereof or any purport of invention thereof, have been or are now being infringed by the Defendant, its customers or others using couplings supplied by the Defendant.

12. That this Honorable Court issue a perpetual injunction and a preliminary injunction during the pendency of this action enjoining and restraining the Plaintiff, its agents, officers, associates, confederates and assigns forever from threatening to sue or suing for alleged infringement thereof Defendant or any customer of the Defendant or other person using couplings supplied by the Defendant and from in any manner unfairly or improperly interfering with the Defendant's continued manu-

facture, use and sale of couplings or the free and undisturbed conduct of the Defendant's business.

13. That damages be awarded Defendant payable by Plaintiff for all acts charged in this counterclaim.

14. That damages in treble the amount be awarded to Defendant payable by Plaintiff for wilfully and wantonly and flagrantly asserting invalid patents against Defendant's customers on a widespread scale throughout the industry and damaging Defendant in its business and trade relations to a great extent which at this time is not readily ascertainable.

15. That Defendant be awarded its attorneys' fees accruing by reason of this counterclaim.

16. That the costs of this action predicated upon this counterclaim be taxed against the Plaintiff in favor of the Defendant and that Defendant have judgment and execution therefor against the Plaintiff.

17. For such other and further relief as to this Honorable Court may seem right and proper.

HUEBNER, MALTBY &
BEEHLER,

VERNON D. BEEHLER, and
HERBERT A. HUEBNER,

By /s/ VERNON D. BEEHLER,
Attorneys for Defendant.

[Endorsed]: Filed April 16, 1948.

[Title of District Court and Cause.]

Civil Action No. 8023-W

REPLY

Plaintiff, The Parker Appliance Company, for its reply to the Counterclaim of the Defendant, Joseph C. Collins, avers as follows:

1.

Plaintiff, as to paragraph 21 of Defendant's Counterclaim, admits that this Court has jurisdiction of actual controversies, under Title 28, United States Code, Section 400, arising under the patent laws of the United States; and admits that there is a controversy with respect to Patent No. 2,212,183, which patent is in suit by virtue of the Plaintiff's Complaint in this cause; and Plaintiff denies that any other actual controversy exists between Defendant and Plaintiff cognizable by this Court.

2.

Plaintiff, as to paragraph 22 of Defendant's Counterclaim, admits that it has asserted, and now asserts, its patent No. 2,212,183 against the Defendant; admits that it has brought this suit charging Defendant with infringement of its patent No. 2,212,183; and Plaintiff denies that it has asserted said patent No. 2,212,183 against Defendant's customers, and denies each and every other allegation of said paragraph.

3.

Plaintiff, as to paragraph 23 of Defendant's Counterclaim, admits the issue of Parker patent No. 1,893,442, Parker patent No. 1,977,240 and Parker patent No. 2,212,183 on the respective dates set forth in said paragraph.

4.

Plaintiff, as to paragraph 24 of Defendant's Counterclaim, admits that the patents, identified in paragraph 23 of Defendant's Counterclaim and referred to in paragraph 3 hereof, have been assigned to Plaintiff as set forth in Plaintiff's Exhibit 2.

5.

Plaintiff, as to paragraph 25 of Defendant's Counterclaim, admits that the three above referred to Parker patents illustrate and relate to a three-piece tube coupling, except, however, that each patent differs from the other as to the three-piece tube coupling and differ as set forth in the claims of each patent; and, as to all of the other allegations contained in said paragraph, Plaintiff denies the same.

6.

Plaintiff, as to paragraph 26 of Defendant's Counterclaim, admits that the claims of each of the above identified Parker patents are directed to a particular construction and arrangement, including a body, a nut and a sleeve for coupling flared tub-

ing; and admits that Defendant's tube coupling charged to infringe consists of a particular construction and arrangement, including a body, a nut and a sleeve for coupling flared tubing; and avers that said Defendant's body, nut and sleeve embody the construction and arrangement of such parts with respect to each other to obtain the complete benefits and advantages embodied in each of the three claims of patent No. 2,212,183; and, as to all other allegations in said paragraph, Plaintiff denies the same.

7.

Plaintiff, as to paragraph 27 of Defendant's Counterclaim, denies the allegations therein contained with respect to patents Nos. 1,893,442 and 1,977,240; and admits notice of infringement of Plaintiff's patent in suit No. 2,212,183 by written document dated January 13, 1948, a copy of which is attached hereto, by reference made a part hereof, marked Plaintiff's Exhibit 3; that a follow-up of said document, Plaintiff's Exhibit 3, was forwarded to Defendant on February 2, 1948, a copy of said follow-up is attached hereto, by reference made a part hereof, marked Plaintiff's Exhibit 4; and Plaintiff avers that Defendant made no reply to either of said Exhibits 3 and 4.

8.

Plaintiff, as to paragraph 28 of Defendant's Counterclaim, denies each and every allegation therein contained.

9.

Plaintiff, as to paragraph 29 of Defendant's Counterclaim, admits that the patent in suit No. 2,212,183 makes reference to patents Nos. 1,893,442 and 1,977,240 as exemplifying that for which the patent in suit is an improvement on.

10.

Plaintiff, as to paragraph 30 of Defendant's Counterclaim, if material, denies the allegation therein contained; and Plaintiff avers that reference in said patent No. 2,212,183 to the earlier patent No. 1,893,442 is notice to the world and to this Defendant that the claims of the patent in suit No. 2,212,183 specifically differ from and cover an improvement over patent No. 1,893,442.

11.

Plaintiff, as to paragraph 31 of Defendant's Counterclaim, if material, denies the allegation therein contained, and Plaintiff avers that reference in said patent No. 2,212,183 to the earlier patent No. 1,977,240 is notice to the world and to this Defendant that the claims of the patent in suit No. 2,212,183 specifically differ from and cover an improvement over patent No. 1,977,240.

12.

Plaintiff, as to paragraph 32 of Defendant's Counterclaim, denies the allegations therein contained.

13.

Plaintiff, as to paragraph 33 of Defendant's Counterclaim, denies that it has charged Defendant

with infringement of any claims of patent No. 1,893,442 or patent No. 1,977,240, and denies that there is any threat or likelihood of a multiplicity of suits; Plaintiff avers that it has never asserted said patents Nos. 1,893,442 and 1,977,240 against Defendant; and Plaintiff denies that any controversy exists in fact within the meaning of Title 28, United States Code, Section 400.

14.

Plaintiff, as to paragraph 34 of Defendant's Counterclaim, denies that patents Nos. 1,893,442, 1,977,240 and 2,212,183 are invalid for any of the reasons set forth in paragraphs 13 to 20, inclusive, of Defendant's Answer, and denies specifically that there is any controversy with respect to patents Nos. 1,893,442 and 1,977,240; and Plaintiff avers that any controversy with respect to patent No. 2,212,183 between Plaintiff and Defendant is already in issue by the Complaint on file and Defendant's Answer thereto.

15.

Plaintiff, as to paragraph 35 of Defendant's Counterclaim, denies the allegations with respect to its patent No. 2,212,183 and avers that, as to patents Nos. 1,893,442 and 1,977,240, there is no controversy in fact between Plaintiff and Defendant.

16.

Plaintiff, as to paragraph 36 of Defendant's Counter claim, denies that it has asserted patents Nos. 1,893,442 and 1,977,240 against Defendant and,

therefore, denies that Defendant has been damaged in any manner; and Plaintiff avers that its assertion against Defendant of its patent No. 2,212,183 is as alleged in its Complaint; and Plaintiff denies any damage to Defendant because of Plaintiff asserting its patent No. 2,212,183 and the bringing of this suit thereunder.

Wherefore Plaintiff Prays:

With Respect to the Counterclaim

1. That as to patents Nos. 1,893,442 and 1,977,240, it be dismissed.

2. That this Court hold that there is no controversy in fact as between Plaintiff and Defendant involving said patents Nos. 1,893,442 and 1,977,240.

3. That Defendant is not entitled to any of the relief requested.

4. That this Court, with respect to patent No. 2,212,183 decree that said patent is valid and has been infringed by Defendant in its manufacture and sale of tube couplings, as set forth in Plaintiff's Complaint on file.

5. That Plaintiff be awarded attorneys' fees.

6. That Plaintiff have such further relief as to this Honorable Court may seem proper and just.

LYON & LYON,
LEONARD S. LYON,
CHARLES G. LYON,
WILL FREEMAN,

By /s/ CHARLES G. LYON,
Attorneys for Plaintiff.

PLAINTIFF'S EXHIBIT No. 3

(Copy)

Bair & Freeman

Lawyers

1400 Field Building

135 South LaSalle Street

Chicago 3, Illinois

Registered Mail

January 13, 1948.

Collins Engineering

6116 Sunset Boulevard

Hollywood, California

Attention of Joe Collins

Gentlemen:

We are writing you in behalf of our client, the Parker Appliance Company of Cleveland, Ohio. The Parker Appliance Company is the owner of United States Letters Patent, No. 2,212,183 dated August 20, 1940, upon an application filed March 2, 1938, entitled "Tube Coupling."

The Parker Appliance Company during the War permitted use of its patented structure by the Armed Services of our Government as an aid in national defense and security. A good bit of the life of the patent has thus been utilized for a very good cause. The patent still has a good many years

to run and under these circumstances it becomes necessary that the Parker Appliance Company assert its patent against unlicensed infringers.

This, then, is formal notice to you of our charge of infringement of the above patent and a request that you discontinue further infringement and account to the Parker Appliance Company for infringement to date.

Just recently the Parker Appliance Company had occasion to assert its patent and suit has been filed in the United States District Court for the Southern District of California, Central Division.

We asked that you carefully review the situation and advise us promptly of your attitude so that we may govern our actions accordingly.

Very truly yours,

BAIR & FREEMAN.

8:CLV

CC to Mr. C. H. Wagner, Parker Appliance Company, Cleveland, Ohio.

PLAINTIFF'S EXHIBIT No. 4

(Copy)

Bair & Freeman

Lawyers

1400 Field Building

135 South LaSalle Street

Chicago 3, Illinois

February 2, 1948.

Collins Engineering
6116 Sunset Boulevard
Hollywood, California

Gentlemen:

Under date of January 13th, we sent you a registered letter with respect to United States Letters Patent No. 2,212,183.

The Registry Return Receipt indicates that you received the above letter on January 16, 1948.

We should like the courtesy of a reply.

Very truly yours,

BAIR & FREEMAN.

8:CLV

CC to Mr. C. H. Wagner, Jr., the Parker Appliance Company, Cleveland.

[Endorsed]: Filed May 10, 1948.

[Title of District Court and Cause.]

No. 7874-CIV. (Consolidated)

OPINION

The Parker Appliance Company is the owner of Parker Patent No. 2,212,183, which said patent covers a tube coupling. A tube coupling is composed of three members: (1) a body, (2) a nut, and (3) a sleeve. Plaintiff admits that the body and the nut are prior art. The validity of the patent depends on the sleeve.

Tube couplings are not new. Tube couplings have been used for many years. Sleeves are not new in tube couplings. In fact, from the very beginning, sleeves have been used by inventors and manufacturers of tube couplings. Throughout the years the shape and form of sleeves have been changed, according to the desires of the users or the so-called inventive genius of the inventor.

A sleeve has a flare and a sleeve head. The shape and form of both the sleeve head and the flare have been changed from time to time. An examination of the drawings in Patents Nos. 1,893,442 (1933), 1,977,240 (1934), 2,212,183 (1940—plaintiff's patent in suit), and of the AC 811 Standard Fitting will disclose the various changes which have been made both in the flare and in the head of the sleeve.

As frequently stated at the trial, the two important improvements claimed in the patent in question are the difference in angle between the outer wall of the sleeve and the inner wall of the

nut, which is termed "the sleeve head angle," and the difference in angle initially between the inner angular surface of the sleeve head and the outer angular surface of the tube flare, which is termed "the differential angle." Plaintiff claims that no prior art, patents, or publications in evidence show these features individually or in combination.

In its patent application, in describing the sleeve, plaintiff did not attempt to depict the angle of the "sleeve head angle" or the angle of "the differential angle." Claim 1 of the patent stated that "said head, having the inner surface thereof provided with a coniform flare so shaped that the initial contact of the head with the flared end of the tube is at the free end of the head * * * whereby during the clamping action said head will be expanded and moved forward along the flared end of the tube. * * *"

Claim 2 provided that "* * * * the outer surface of said head and the said inner wall of the coupling member being so shaped relative to each other that when the sleeve head expands during the clamping action they will contact only in the region of the clamping shoulder * * *"

Claim 3 stated "* * * said head having the inner surface thereof provided with a coniform flare so shaped that the initial contact of the head with the flared end of the tube is at the free end of the head and adjacent the outer end of the flared end of the tube, the outer surface of said head and said inner wall of the coupling member being so shaped

relative to each other that when the sleeve head expands during the clamping action, the portion of said head contacting with the flared end of the tube is at all times out of contact with the coupling member whereby the clamping face of the head against the tube end is determined by the spring tension of the metal forming said head.”

In each of the claims, plaintiff alleges the parts are “so shaped” that they produce certain, particular results. With the patent application plaintiff attached certain drawings, depicting the flare “so shaped” that it would produce the results as described in the patent.

Plaintiff alleges defendants are infringing plaintiff’s patent and brings these actions for infringement. The defendants contend, among other things, that Claims 1, 2 and 3 of the Parker Patent, #2,212,183, are invalid for uncertainty and failure to meet the requirements of Revised Statutes, Section 4888, 35 USCA §33.

As heretofore stated, plaintiff did not in the patent application attempt to actually describe the flare “so shaped” but after the use of the words “so shaped” merely described what it would do. It would seem that the claim, after the words “so shaped,” is simply a functional description.

The pertinent provisions of Revised Statutes, Section 4888, 35 USCA § 33, are as follows:

“Before any inventor or discoverer shall receive a patent for his invention or discovery he shall make application therefor, in writing,

to the Commissioner of Patents, and shall file in the Patent Office a written description of the same, and of the manner and process of making, constructing, compounding and using it, in such full, clear, concise and exact terms as to enable any person skilled in the art or science to which it appertains or with which it is most nearly connected, to make, construct, compound, and use the same; and in case of a machine, he shall explain the principle thereof, and the best mode in which he has contemplated applying that principle, so as to distinguish it from other inventions; and he shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery.”

From the foregoing, it will be noted it is incumbent upon the inventor to file a written description of the thing claimed invented, containing “full, clear, concise and exact terms as to enable any person skilled in the art or science to which it appertains * * * to make, construct, compound, and use the same.” If the inventor fails to include in his patent claim such a description, then the patent must be found to be invalid.

“An inventor may not compel independent experimentation by others in order to ascertain the limits of his claims since under the patent law the claims measure the invention.”

—Sales Affiliates, Inc., v. Hutzler Bros. Co.,
71 F. Supp. 287.

Plaintiff in its claim said the sleeve is "so shaped" that it produces certain results. What did plaintiff mean by "so shaped"? There is nothing in the patent application or in the claims to indicate just how the sleeve was to be shaped. No effort was made to give the various angles of the sleeve or to set out any other pertinent engineering detail. Plaintiff was satisfied with describing the sleeve as "so shaped" that it would produce a certain result.

With the patent application plaintiff filed certain drawings, illustrating the flare "so shaped" as mentioned in the application. Although the drawings in themselves give the general shape and contour of the sleeve, the drawings do not indicate in any way the size of the angles, evidently leaving the size of the angles to engineering research.

The claims, as stated by the Court in *Continental Paper Bag Co. v. Eastern Paper Bag Co.*, 210 U. S. 405, 419, measure the invention. The claims may be explained and illustrated by the description, but the illustration cannot enlarge the claims. Again, in the case of *Yale Lock Co. v. Greenlaw*, 117 U. S. 554, at 559, the Court says:

"* * * The scope of letters-patent must be limited to the invention covered by the claim, and while the claim may be illustrated it cannot be enlarged by language used in other parts of the specification."

In the *Incandescent Lamp Patent Case*, 159 U. S. 465, the Court says, at page 474:

“* * * If the description be so vague and uncertain that no one can tell except by independent experiments how to construct the patented device, the patent is void.”

Measured by the Incandescent Lamp Patent case, *supra*, it would seem necessary to hold the instant patent void. No one, taking the patent and not using the illustrations, could make the sleeve in question “so shaped” that it would produce the results claimed for it, without independent experimentation. The idea is there expressed that the sleeve could be “so shaped” as to produce certain specific results, but anyone attempting to make such a sleeve would have to experiment to determine, by the trial and error method, just what shape should be used on the sleeve.

Although it may be, as set forth by plaintiff in its brief, that the claims of a patent must be read in the light of the drawings and specifications, nevertheless the Supreme Court has limited the right of the patentee to the claims made, and although the illustrations may explain the patent they may not be used to enlarge the claims.

“A patent covers only that which it claims, and only what is expressly claimed can be infringed.”

Continental Paper Bag Co. v. Eastern Paper Bag Co., *supra*.

The case of *Halliburton Oil Well Cementing Co. v. Walker, et al.*, 329 U. S. 1, is somewhat similar to the patent in suit. In that case Walker Patent

No. 2,156,519 was for an improvement over a prior patent designed to measure the distance from the top of an oil well to the fluid surface of the oil. The patent was held invalid for failure of the claim to make a "full, clear, concise and exact" description of the alleged invention required by Revised Statutes 4888, 35 U. S. C. § 33. The applicant for the patent described the most crucial element of the new combination in terms of what it would do rather than in terms of its own physical characteristics, and at no time did any of the claim suggest the physical structure of the acoustical resonator. The Court said, at page 9:

"We have held that a claim with such a description of a product is invalid as a violation of Rev. Stat. 4888."

From the above it can be seen there can be no infringement of a patent if what is described in the patent application is not claimed.

If we disregard the drawings filed by plaintiff herein with its application and look only to the claims, we find plaintiff is claiming a patent on a sleeve "so shaped" that it will produce certain results. It seems to the Court that this comes within the decision of *Halliburton v. Walker*, *supra*.

Plaintiff makes no attempt to physically describe the structure. He says only that the sleeve is "so shaped" that it will produce certain results.

In *The Incandescent Light Patent* case, *supra*, the inventors discovered a carbonized paper that could be used for a filament in an electric light

globe. However, instead of confining themselves to carbonized paper, as they might properly have done, they made a broad claim for every fibrous or textile material. The Court said, at page 476:

“* * * Under these circumstances, to hold that one, who had discovered that a certain fibrous or textile material answered the required purpose, should obtain the right to exclude everybody from the whole domain of fibrous and textile materials, and thereby shut out any further efforts to discover a better specimen of that class than the patentee had employed, would be an unwarranted extension of his monopoly, and operate rather to discourage than to promote invention.”

In the case at bar it seems that plaintiff has traveled the same road, inasmuch as plaintiff claims a patent on a sleeve head “so shaped” that it will produce certain results. Plaintiff not only attempts to exclude all others from using a sleeve head as described in its drawings but also from the use of sleeve heads “so shaped” that they will produce the same results as plaintiff’s patent in suit.

In *General Electric Company v. Wabash Appliance Corp.*, 304 U. S. 364, plaintiff obtained a patent relating to a tungsten filament for incandescent lamps, based on Pacz Patent #1,410,499. Pacz discovered that a coarse grained tungsten filament was much superior to a tungsten filament of small grain and had a tendency to cure many of the defects of the tungsten filament then used. The claim

set out that the grains must be “of such size and contour as to prevent substantial sagging and off-setting.” Apart from the statement with respect to their function, nothing was said about the size or how the size was distinguished from the grains of earlier filaments. The Court said:

“The claim uses indeterminate adjectives which describe the function of the grains to the exclusion of any structural definition, and thus falls within the condemnation of the doctrine that a patentee may not broaden his product claims by describing the product in terms of function.”

And, as a consequence, the Court held the claim to be invalid on its face, as it failed to make a disclosure sufficiently definite to satisfy the requirements.

From the authorities, we are constrained to hold that Claims 1, 2, and 3 of Parker Patent #2,212,183 are invalid for uncertainty and failure to meet the requirements of Revised Statutes 4888, 35 USCA §33.

Defendants also claim that Parker Patent #2,212,183 is invalid for want of invention over prior art. As stated before, sleeves are not new, and an examination of prior patents indicates that many changes have been made in the shape and form of the sleeve. There has been a constant search on the part of users and inventors to develop a coupling which would be entirely satisfactory, and even the latest developments in tube couplings have not pro-

duced entirely satisfactory results. There is no reason to assume experimentation on couplings and sleeves is at an end, and changes may be made in the future, as they have been in the past, changing the various angles of the sleeve flare and sleeve head. To establish a patent there must be more than mere mechanical skill or, as the Court said in *Gomez v. Granat*, 177 F.(2d) 266 (9th Circuit), at page 268:

“* * * something akin to genius as distinguished from mere mechanical skill.”

There are many instances in which patents have been claimed because of changes in contours. In the case of *Boynton v. Chicago Hardward Foundry Co.* 77 F.(2d) 799, the invention pertained to the process of making a mosaic tile for pavement, mural, and other decoration. Generally it disclosed the same method of making mosaics as did previous patents. It differed, however, in two details. The ridges of the matrix which formed the boundaries of the several inlays were triangular or V-shaped, the base of the triangle resting upon the floor of the matrix. In previous patents they were rectangular. It was claimed the vertical sides and the horizontal bottom would hold the pointed joints more securely than the triangular sides and apex-shaped bottom. The Court said:

“We are of the opinion that inventive genius did not manifest itself in the use of rectangular instead of V-shaped ridges. That, at most, would involve nothing more than mechanical skill.”

In *Gomez v. Granat*, *supra*, the Court said:

“* * * it has been recognized that if an improvement is to obtain the privileged position of a patent, more ingenuity must be involved than the work of a mechanic skilled in the art. * * * That is to say the new device, however useful it may be, must reveal the flash of creative genius not merely the skill of the calling.”

And in *Thompson v. Boisselier*, 114 US 1, (1850), the Court, at page 11, said:

* * * it is not enough that a thing shall be new, in the sense that in the shape or form in which it is produced it shall not have been before known, and that it shall be useful, but it must, under the Constitution and the statute, amount to an invention or discovery.”

Again, in *Hollister v. Benedict Manufacturing Co.*, 113 US 59, the Court held the invention not to be patentable, as it did not:

“spring from that intuitive faculty of the mind put forth in the search for new results, or new methods, creating what had not before existed, or bringing to light what lay hidden from vision;” but that it evidenced “only the display of the expected skill of the calling” and involved “only the exercise of the ordinary faculties of reasoning upon the materials supplied by a special knowledge, and the facility of manipulation which results from its habitual and intelligent practice; * * *”

We have here a case in which the plaintiff is claiming a patent on a flare in which he has changed the contours of the flare itself. Flares have been used for many, many years, and numerous changes have been made in the various angles thereof. Experimentation is constantly being carried on not only by plaintiff but also by others to determine whether or not a different angle in the flare of the sleeve or in the sleeve head is desirable. In fact, the defendants claim, among other things, that the AN Standard and the AC 811 couplings do not infringe plaintiff's patent because the angles of the sleeve head and the flare of the sleeve are different from those angles claimed by plaintiff.

In other words, it is defendants' contention that the Government in establishing a standard fitting did not follow the contours as claimed by plaintiff but established other contours which the Government evidently deemed superior to or an improvement on the previous contours and made them a requirement in the standard fittings. This is only another indication that there is a continuing and everlasting search on the part of inventors and users of tube couplings to develop a coupling superior to those now in use.

Plaintiff says, in its opening brief: "As frequently stated at the trial, the two important improvements of the Parker patent are the difference in angle between the outer wall of the sleeve and the inner wall of the nut which is termed the 'sleeve head angle' and the difference in angle initially between the inner angular surface of the

sleeve head and the outer angular surface of the tube flare, which is termed the 'differential angle.' '' We are of the opinion that the change in the angles between the outer wall of the sleeve and the inner wall of the nut and the outer surface of the sleeve head, and the outer angular surface of the tube flare, does not justify a monopoly. Consequently, judgment should be rendered herein holding that Patent No. 2,212,183 is invalid, and such will be the order. Findings in conformity herewith are to be prepared by defendants' counsel.

Dated: October 16, 1950.

/s/ HARRY C. WESTOVER,

District Judge.

[Endorsed]: Filed October 17, 1950.

In the United States District Court, Southern District of California, Central Division

No. 7874-HW Civil

THE PARKER APPLIANCE COMPANY,

Plaintiff,

vs.

IRVIN W. MASTERS, INC.,

Defendant.

No. 8023-HW Civil

THE PARKER APPLIANCE COMPANY,

Plaintiff,

vs.

JOSEPH C. COLLINS, Doing Business Under the Firm Name and Style of COLLINS ENGINEERING COMPANY, Hollywood, California,

Defendant.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

Findings of Fact

I.

Plaintiff, The Parker Appliance Company, is a corporation organized and existing under the laws of the State of Ohio.

II.

Defendant, Irvin W. Masters, Inc., is a corporation organized and existing under the laws of the State of California, and has its principal office and place of business in the City of Burbank, County of Los Angeles, State of California, within the Southern District of California, Central Division.

III.

Defendant, Joseph C. Collins, is a resident of the State of California, and does business under the firm name and style of Collins Engineering Company, in the City of Hollywood, County of Los Angeles, State of California, within the Southern District of California, Central Division.

IV.

These actions were instituted by the plaintiff separately against the respective defendants for alleged infringement of United States Letters Patent No. 2,212,183, granted August 20, 1940, upon an application of Arthur L. Parker filed March 2, 1938, the actions being brought under Section 24 of the Judicial Code, Paragraph 7, and R. S. Sec. 4921 (35 U.S.C. 70) seeking the equitable remedy of an injunction and asking for an accounting of profits and an award for damages. All three claims of the patent in suit were charged to be infringed. The respective defendants answered separately, attacking the validity of said patent and denying infringement thereof. The two actions were thereafter consolidated for trial.

V.

The plaintiff became the owner of said Letters Patent No. 2,212,183 by an assignment dated December 28, 1943, duly recorded in the United States Patent Office, and plaintiff has ever since been and now is the owner of said Letters Patent.

VI.

The subject matter of said Letters Patent No. 2,212,183 is a three-piece coupling or fitting for flared end metallic tubes. The three parts comprise a body with a tapered nose against which the inner surface of the flared tube end seats and seals, a sleeve having an internal flare adapted to engage the outer flared surface of the tube end, and a nut threadedly associated with the body and adapted to impart and end thrust to the sleeve for clamping the parts together on the tube. Three-piece couplings of this type are very old in the art and the patent in suit is in a very crowded art. The two asserted improvements claimed for the patent (but not properly defined in the patent claims) are the difference in angle between the outer wall of the sleeve and the inner wall of the nut, which is termed "the sleeve head angle" and the difference in angle initially between the inner angular surface of the sleeve head and the outer angular surface of the tube flare, which is termed "the differential angle."

VII.

The descriptive portion of the patent in suit does not describe either the sleeve head angle or the

differential angle nor illustrate the same in the drawing in such full, clear, concise, and exact terms as to enable any person skilled in the art or science to which it appertains or with which it is most nearly connected to make, construct or use the same.

VIII.

In each of the claims of said Letters Patent No. 2,212,183 the parts asserted to contribute the novelty are described as "so shaped" that they produce certain particular functional results. Claim 1 states that "said head, having the inner surface thereof provided with a coniform flare so shaped that the initial contact of the head with the flared end of the tube is at the free end of the head * * * whereby during the clamping action said head will be expanded and moved forward along the flared end of the tube. * * *" Claim 2 in such respect provides that "* * * the outer surface of said head and the said inner wall of the coupling member being so shaped relative to each other that when the sleeve head expands during the clamping action they will contact only in the region of the clamping shoulder * * *" Claim 3 states "* * * said head having the inner surface thereof provided with a coniform flare so shaped that the initial contact of the head with the flared end of the tube is at the free end of the head and adjacent the outer end of the flared end of the tube, the outer surface of said head and said inner

wall of the coupling member being so shaped relative to each other that when the sleeve head expands during the clamping action, the portion of said head contacting with the flared end of the tube is at all times out of contact with the coupling member whereby the clamping face of the head against the tube end is determined by the spring tension of the metal forming said head." The patentee fails to particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery.

IX.

The patents and a publication listed below were offered in evidence by the defendants as prior art and those considered more pertinent were explained and their relation to the subject matter of the patent in suit analyzed by expert witnesses for both plaintiff and the defendants:

| | | |
|---------------|-----------|----------------|
| W. N. Abbott | 46,603 | Feb. 28, 1865 |
| G. H. Buzzell | 177,686 | May 23, 1876 |
| H. Guyer | 182,435 | Sept. 19, 1876 |
| H. Guyer | 196,084 | Oct. 16, 1877 |
| R. McConnell | 290,446 | Dec. 18, 1883 |
| F. George | 326,425 | Sept. 15, 1885 |
| I. B. Potts | 406,060 | July 2, 1889 |
| J. Anderson | 535,236 | Mar. 5, 1895 |
| L. F. Jordan | 654,735 | July 31, 1900 |
| J. J. Dossert | 772,136 | Oct. 11, 1904 |
| F. W. Reed | 964,315 | July 12, 1910 |
| S. L. Brown | 1,058,542 | Apr. 8, 1913 |

| | | |
|----------------|-----------|---------------|
| A. W. Bachmann | 1,352,342 | Sept. 7, 1920 |
| J. Benzion | 1,680,080 | Aug. 7, 1928 |
| E. E. Hewitt | 1,820,020 | Aug. 25, 1931 |

Pipes and Tubes

Their Construction and Jointing

by

Philip R. Bjorling

London

Whittaker and Co.

White Hart Street, Paternoster Square

1902

Library of Congress No. TS 280 B 6

X.

The prior art listed above, all of which was considered by this Court, illustrates numerous three-piece fittings for flared end metallic tubes embodying the three essential elements found in the fitting of the patent in suit and in the same relationship for the same ultimate purpose. These prior patents disclose various shapes and forms of sleeve heads and tube flares and angular relationships between the several parts.

XI.

The defendants have independently of one another engaged in the business of manufacturing and/or supplying nuts, bodies and sleeves sepa-

rately, but not as assembled fittings, to ultimate users, such as airplane manufacturers and others, who assemble the requisite parts with tubes procured by the users from other sources and customarily cut and flared by the users. The dimensions and angular relationships of the several parts fabricated or otherwise procured by the defendants and sold to the ultimate users conform to certain Government specifications identified as AC 811 and AN Standard. The defendants assert that fittings, the parts of which comply with such specifications, do not correspond to the claims of the patent in suit, but whether they do or do not this Court does not need to find because it holds the claims of the patent in suit to be invalid. This Court does find, however, that neither the description, drawings, nor claims of the patent in suit contain dimensions, proportions, or angular relationships corresponding to the dimensions, proportions or angular relationships contained in the Government specifications under which the accused fittings and parts were made or sold.

XII.

No one, by reference to the Parker Patent 2,212,183, could produce a fitting which would achieve the results called for by the patent without experimentation, and there is evidence that various shapes of the respective parts might be employed to produce the desired results other than the shapes illustrated in the patent drawing

XIII.

The patentee Parker's contribution to the art, if it is possible of definement, is extremely narrow, and the language of the claims is broad and ambiguous, therefore the claims are broader than the invention, if any.

XIV.

The claims of the Parker Patent 2,212,183 are not susceptible of any interpretation which would preserve their validity because the functional language at the exact point of novelty, if there be any novelty, is lacking in essential structural description.

XV.

The differences, if any, disclosed and attempted to be claimed in the Parker Patent 2,212,183 over the prior art, are so insignificant as to be the work merely of the skilled mechanic and do not involve patentable invention.

XVI.

More specifically, any change which the patentee Parker, in Patent 2,212,183, made over the prior art in the angle between the outer wall of the sleeve and the inner wall of the nut, and between the inner surface of the sleeve head and the outer angular surface of the tube flare, involves no more than mechanical skill, does not rise to the dignity of invention, and cannot justify a patent.

XVII.

Defendants filed a counterclaim seeking declaratory judgment of invalidity and non-infringement of two other Parker owned patents, namely Nos. 1,893,442 and 1,977,240. At the trial plaintiff's counsel stipulated that said patents were not infringed, in view of which this Court finds that if a controversy did exist (a point which the Court does not determine) there is no present controversy and therefore no need for the Court to pass upon said patents Nos. 1,893,442 and 1,977,240.

Conclusions of Law

1. This Court has jurisdiction of the subject matter involved herein and of the parties hereto under the patent laws and the Judicial Code, more particularly R. S. Sec. 4121, 35 U.S.C. 70, and Sec. 24 of the Judicial Code, Paragraph 7.

2. The description in the Letters Patent in suit No. 2,212,183 does not comply with Revised Statutes Sec. 4488, 35 U.S.C. 33, in that it fails to contain a description of the manner and process of making, constructing and using the alleged invention in such full, clear, concise and exact terms as to enable any person skilled in the art or science to which it appertains or with which it is most nearly connected, to make, construct, and use the same, and said Letters Patent as to all claims thereof is therefore invalid.

3. Claims 1 to 3 inclusive of said Letters Patent in suit No. 2,212,183 do not comply with Revised Statutes Sec. 4888, 35 U.S.C.A. Sec. 33, but are un-

certain, indefinite, and ambiguous, and fail to properly point out and distinctly claim the part, improvement or combination which the patentee Parker claims as his invention, and therefore claims 1 to 3 inclusive of said Letters Patent are invalid.

4. Claims 1 to 3 inclusive of said Letters Patent in suit No. 2,212,183 are invalid for want of invention over the prior art.

5. All claims of said Letters Patent in suit No. 2,212,183 being invalid, this Court deems it to be unnecessary to express any conclusion as to whether, if valid, all or any of said claims would be infringed.

6. In view of the stipulation by plaintiff's counsel that the other plaintiff owned patents Nos. 1,893,442 and 1,977,240 mentioned in defendants' counterclaim are not infringed, this Court has no occasion to pass upon said patents and therefore said counterclaim should be dismissed without prejudice and without costs.

7. The complaint should be dismissed for want of equity, and costs be allowed defendants, including reporters' fees.

Dated at Los Angeles, California, this 7th day of Dec., 1950.

/s/ HARRY C. WESTOVER,
Judge.

The foregoing Findings of Fact and Conclusions of Law are Disapproved as to form.

Nov. 14, 1950.

LYON & LYON,
/s/ CHARLES G. LYON,
Attorneys for Plaintiff.

The foregoing Findings of Fact and Conclusions of Law are approved as to form.

Nov. 14, 1950.

HUEBNER, BEEHLER, WORREL, HERZIG &
CALDWELL,

/s/ HERBERT A. HUEBNER,
/s/ VERNON D. BEEHLER,
Attorneys for Defendants.

[Endorsed]: Filed December 7, 1950.

In the United States District Court, Southern
District of California, Central Division

No. 7874-HW Civil

THE PARKER APPLIANCE COMPANY,

Plaintiff,

vs.

IRVIN W. MASTERS, INC.,

Defendant.

No. 8023-HW Civil

THE PARKER APPLIANCE COMPANY,

Plaintiff,

vs.

JOSEPH C. COLLINS, Doing Business Under the
Firm Name and Style of COLLINS ENGI-
NEERING COMPANY, Hollywood, Califor-
nia,

Defendant.

FINAL JUDGMENT

These actions having been consolidated for trial
came on to be heard by this Court and were tried
and argued by counsel for the respective parties
and thereupon, upon consideration thereof,

It Is Ordered, Adjudged and Decreed:

I.

That the complaints herein be and they are hereby
dismissed upon the merits.

II.

That the counterclaims herein be and they are hereby dismissed for lack of present controversy and without prejudice.

III.

That costs be awarded the defendants to be taxed in the sum of \$600.22 and that defendants have execution for the same.

Dated at Los Angeles, California, this 7th day of December, 1950.

/s/ HARRY C. WESTOVER,
Judge.

The foregoing Final Judgment is disapproved as to form Nov. 14, 1950.

LYON & LYON,
/s/ CHARLES G. LYON,
Attorneys for Plaintiff.

The foregoing Final Judgment is approved as to form Nov. 14, 1950.

HUEBNER, BEELHER, WORREL, HERZIG &
CALDWELL,

/s/ HERBERT A. HUEBNER,
/s/ VERNON D. BEEHLER,
Attorneys for Defendants.

Judgment entered Dec. 8, 1950.

[Endorsed]: Filed December 7, 1950.

[Title of District Court and Cause.]

Nos. 7874-HW and 8023-HW Civil

NOTICE OF APPEAL

Notice is hereby given that The Parker Appliance Company, Plaintiff above named, hereby appeals to the Court of Appeals for the Ninth Circuit from the Final Judgment entered in this action on December 8, 1950.

LYON & LYON,
/s/ CHARLES G. LYON,
Attorneys for Plaintiff.

Of Counsel:

/s/ WILL FREEMAN.

January 2, 1951.

[Endorsed]: Filed January 2, 1951.

[Title of District Court and Cause.]

REPORTERS' TRANSCRIPT OF
PROCEEDINGS

Honorable Harry C. Westover, Judge Presiding.

Appearances:

For the Plaintiff:

WILL FREEMAN,
W. M. VAN SCIVER,
LYON and LYON,
CHARLES G. LYON.

For the Defendants:

HUEBNER, BEEHLER, WORREL,
HERZIG & CALDWELL, by
HERBERT A. HUEBNER, and
VERNON D. BEEHLER,

June 14, 1950, 10:00 A.M.

The Clerk: The Parker Appliance Company vs. Irvin W. Masters, Inc., No. 7874-HW Civil, and the Parker Appliance Company vs. Joseph C. Collins, doing business under firm name and style of Collins Engineering Co., No. 8023-HW Civil.

Mr. Huebner: Ready for defendants.

Mr. Freeman: Ready for the plaintiff.

(Other matters were then taken up.)

The Clerk: Parker Appliance vs. Masters and Collins.

The Court: Before we start with this case, I might announce for the benefit of the attorneys that we expect to commence at 10:00 o'clock in the morning. We will take a recess at 11:00 o'clock for 10 or 15 minutes, and we will stop at 12:00. We will reconvene at 2:00 and we will take a recess of 10 or 15 minutes at 3:00, and then we will stop at 4:00.

Now, one of the counsel has intimated to me that this case is going to take a long, long time to try. I want to call counsel's attention to the fact that I am going north to a conference of the judges on the 27th. This case will have to be completed by the 23rd. If you don't get it completed by the 23rd, you may find yourselves over in September or October. Consequently, I want you to stipulate to every issue that can be stipulated to. I don't want you to waste any of [3*] your time or waste any of the court's time in going into a lot of immaterial things.

My experience is that a great part of the testimony that is introduced in lawsuits is immaterial as far as the court is concerned. It may not be immaterial as far as the lawyers are concerned, because the lawyers have no way of looking into the mind of the court and determining what he thinks is of value and what he thinks is not of value. But I want you to keep in mind that if you want an early decision of this matter, you better make arrangements to get it out of your way within the next two weeks, a week from Friday.

I have read the plaintiff's trial brief. Unfortunately, I have not had a trial brief from the de-

* Page numbering stamped at top of page of original Reporter's Transcript.

fendants. I do not know what the theory of the case is except from the viewpoint of the plaintiff. May I ask counsel a question?

Mr. Huebner: Yes, your Honor. I am prepared to make a statement, if you desire.

The Court: All right. I notice in the plaintiff's trial brief that the statement is made that during the war, because there was such a shortage of the things manufactured by the plaintiff, the plaintiff granted to the defendant the right to manufacture without any compensation. Is that correct?

Mr. Huebner: Well, there was an acquiescence, if not a formal license. As I understand the facts to be, some letters were sent out. I don't know how many, but probably a number [4] of letters were sent out by the plaintiff.

The Court: All right. If there was not a direct license, then at least there wasn't any attempt made by the plaintiff to prohibit the defendant from manufacturing.

Mr. Huebner: That we concede, your Honor.

The Court: And subsequent to the termination of the fighting war, the plaintiff attempted to revoke whatever right the defendants had.

Mr. Huebner: The plaintiff so attempted as of December 1, 1945.

The Court: And then the defendants raised the issue that the patents, which the plaintiff claimed, were not valid. Is that right?

Mr. Huebner: The defendant didn't raise the issue until he was sued. The defendants, there are two, did not raise the issue until they were sued.

The Court: There are two defendants here?

Mr. Huebner: Yes, Collins Engineering and Masters, Inc.

The Court: All right. Then I assume that the defendants continued to manufacture, ignoring the request or the demand of the plaintiff, and when the plaintiff filed suit, then the defendants raised the issue?

Mr. Huebner: That was the first time, your Honor, they had occasion to raise the issue. They, as a matter of fact, probably did not know under what patents, if any, they were [5] purportedly licensed. It was a blanket type of an acquiescence, such as many patent owners gave during the war. There was no stipulation in any such license that the defendants acknowledged the validity. It was just one of those frenzy or panic affairs where everyone pitched in and made it.

The Court: I know we were engaged in a very serious war. We had to have materials and many people, corporations, and individuals, gave away rights.

Mr. Huebner: Yes.

The Court: And privileges that they had, in order to carry on the war.

Mr. Huebner: Yes.

The Court: That they wouldn't have done under ordinary circumstances.

Mr. Huebner: That is right. [6]

The Court: And if they did not grant you a specific right under a specific contract, at least they acquiesced in your manufacturing the articles in question?

Mr. Huebner: They acquiesced, yes, but our

point is that we never did use their patents.

The Court: I also notice that in the plaintiff's trial brief there is a statement, I am not quite sure, but I think there is a statement that the materials as manufactured by the plaintiff and the materials manufactured by the defendant are identical.

Mr. Huebner: Yes, but that is not pertinent. It is true that the specifications——

The Court: I am not talking about whether it was pertinent; I am trying to find out what the facts are.

Mr. Huebner: As far as we know, the facts are that the defendants manufacture parts, not assembled fittings, but parts that go into assembled fittings, which are identical in size and shape and of the same materials as those manufactured and sold by the plaintiff, because the Army and Navy standard requires it. It is a governmental specification. So that the commercial items of both companies or all three companies are identical.

The Court: What I am saying to you relative to the license and the acquiescence is applicable also to the other defendant, is it not? [7]

Mr. Huebner: Both defendants. We represent both defendants.

The Court: You represent both defendants?

Mr. Huebner: Yes.

Mr. Freeman: The cases have been consolidated for trial, your Honor.

The Court: You can make an opening statement. I want to find out how many facts we can agree upon.

Opening Statement on Behalf of Plaintiff

Mr. Freeman: May it please the court, as you are already aware, this is a suit brought for patent infringement of the A. L. Parker patent No. 2,-212,183, by the owner, the plaintiff here, The Parker Appliance Company. The Parker Appliance Company has a place of business in Cleveland, Ohio, and likewise has a place of business and a manufacturing plant in Los Angeles within this district. I am going to hand your Honor a soft copy or an extra copy of the patent in suit, which the court may retain and use as a work copy.

Originally we filed suit against Irvin W. Masters, Inc., a corporation, of Burbank, California, and shortly thereafter filed another suit against Joseph C. Collins, doing business as the Collins Engineering Company of Hollywood, California. Mr. Huebner represents both defendants. After the filing [8] of these two suits they were consolidated for trial. As I have said, the products made by the two defendants are identical. They do coincide with the commercial products made by the plaintiff. And I don't think there is any disagreement on that point.

Now, The Parker Appliance Company, the plaintiff, has for many years been engaged in the manufacture and sale of what we shall call two couplings or fittings. These fittings or two couplings are particularly adapted for use in the aircraft industry. Now, the subject-matter of the patent in suit is directed to that kind of a coupling. It is sometimes called a fitting, or sometimes called a coupling, and those terms will be used throughout

the trial, I am sure, by both the plaintiff and the defendant.

I will first direct your Honor's attention to the patent itself. It was filed or applied for in the United States Patent Office on March 2, 1938. It issued a couple of years thereafter on August 20, 1940. The patent issued to Arthur L. Parker, an individual. It was later assigned to this plaintiff The Parker Appliance Company, and there is no question with respect to title of the patent in suit being in the plaintiff here.

Generally speaking, two couplings of the kind here involved include three component parts. Your Honor will hear a lot about a body member, a sleeve, and a nut. Those are [9] the three components that go to make up a fitting.

I am going to hand your Honor, as illustrative of what is here involved, a physical structure upon which we have marked the term "nut," "body," and "sleeve," as well as the word "tube." That will be helpful as we proceed in our case, and as we use relative terms in designating the patent, as to what the plaintiff makes under the patent and as to what we charge is an infringement.

The body member, which you have in your hand, may take many different forms. The one that you have there is what we might call a straight, that is, a direct line through. In some instances, the body member is T-shaped, that is, there are three entrances or three openings into the body member. In some cases it is curved or arcuate and called an elbow. In any event, one end of the body member

is screw-threaded, and there is also provided adjacent those screw threads a wrench-engaging portion. That is the square or the octagon-shaped portion or six-sided-shaped portion on the body member of the fitting that I gave your Honor. One end of the body includes what we will call a cone-shaped surface or a beveled surface, sometimes referred to as an inclined surface, or even a tapered surface. That particular surface is the part of the fitting against which the inside of a flare of a tube may rest or it seats itself against that cone-shaped or inclined or bevel-shaped portion. [10]

I am going to hand your Honor a separate piece of tubing with a flare on it, and it is that flared or funnel-shaped portion which engages the cone-shaped part of the body member proper. [11]

Now, the physical devices that I have given you, your Honor, I have shown those to Mr. Huebner before we came into court this morning.

I referred to the body member. There are the other two members, which are the sleeve and the nut. They go together with the body member for making up the tube coupling of the patent. The sleeve surrounds the tube and engages the outside surface of the flare of the tube to be coupled to the body member. There is a nut member which extends around the sleeve, or it encompasses it. It engages a shoulder on the sleeve and it is threaded, that is, screw threaded as a connection between the nut and the body member so that as you screw the nut onto the body member, you have a shoulder engage the

sleeve, which in turn engages the flare of the tube for bringing the mating surfaces or the engaging surfaces of the tube with the body member to provide a connection that will hold a terrific amount of pressure.

The Parker patent—I am now speaking about the patent—is directed to more than merely the three component parts, which I have here referred to as a body, a nut, and sleeve. Each of these three parts, as we will show, cooperates one with the other and are so shaped as to bring about something different than what was done before with the earlier so-called three-piece fittings.

At the outset, I want to call your Honor's attention to [12] the fact that Parker himself made earlier, or before the application of this particular patent, a three-piece fitting that likewise included a nut, a body member, and a sleeve. However, that earlier fitting and, as we will show, the three-piece fittings of the prior art, did not include a sleeve member of this particular kind, and you will hear the term used, outside angle on the sleeve. Those are additions over and above what we might call the earlier type of three-piece fittings.

Now, there are also fittings of the kind that are sometimes called two-piece fittings.

As I have said, the plaintiff here was a pioneer in the manufacture of fittings generally. Late in the 30s, Mr. Parker developed the particular three-piece fitting of the kind now shown in the Parker patent. It differed from the earlier three-piece fittings in that the outer wall of the sleeve was in-

clined so that its nose or forward end, or the lower end, might expand outwardly toward the nut and yet not come in contact with the inner wall of the sleeve—with the inner wall of the nut.

This feature, as we will point out, brought about a very great advantage. It solved a problem, especially a problem that confronted the aircraft industry in connection with hydraulic fittings where high pressures are used.

Your Honor will hear during the trial the term spring [13] tension or hook tension, and those are terms that are defined or expressed in the Parker patent and in the claims of the Parker patent. That reference to spring or hook tension deals with the sleeve and the expansion of the lower or nose end of the sleeve for firmly gripping the outside surface of the flare against the inclined or tapered surface of the body member. That is something that is essential, it is necessary in order that you make a tight seal. We will show that this seal is accomplished to withstand high pressures without the use of any gaskets or any sealing fluid. The surfaces have to be accurate, they have to be so arranged that you can have nothing but metal to metal contact and yet withstand pressures that sometimes run up to 3,000 pounds per square inch.

Now, the inside of the sleeve, that is, the sleeve itself, is so shaped with respect to the nut which moves the sleeve downwardly on the flare so that the lower end of the sleeve will not come into intimate contact with the inside wall of the nut because, if that happens, you have what we call jamming, and

then you cannot remove the nut without likewise removing the sleeve or moving the two pieces together and, of course, that is undesirable, as we will show, particularly in aircraft fittings where you have very little space and you are called upon to put in many hundreds, yes, thousands, of fittings, and many tubes in connection with the [14] hydraulic systems of aircraft.

The cooperation of the expansion of the sleeve head bringing about what I have referred to as hook tension and permitting freedom of such expansion within the nut produced an advantage and solved a problem soon recognized by those skilled in the art as a solution to a problem which had confronted the industry for many years. Once that problem was solved by Parker, it was soon adopted.

The patentee Parker disclosed in the three figures of his patent drawings exactly what I mean by the body member, the nut, and the sleeve. The relationship of each part is fully disclosed and the part that each plays in the makeup of the combination, which we collectively call the tube coupling. It is of utmost importance that the parts be so shaped and so arranged as to permit hook tension and at the same time a full contact between the sleeve shoulder and the nut shoulder. The shoulders of the nut and sleeve, where they contact or come in contact with each other, is referred to in the patent as the region of contact.

The inside of the sleeve is arranged at an angle different than the angle of the exterior of the flare, so that when you first engage the sleeve against the

flare, you have contact between the flare and the sleeve only at the nose end or lower end. Now, these two different angles are sometimes referred to as differential angles. [15].

Now, as the parts are brought home or are screwed together, you start with toe contact between the sleeve and the flare. Your Honor will hear throughout this trial the term used of initial contact or line contact. That is what we mean when we say that the toe end of the flare or the bottom end of the flare engages the bottom end of the sleeve, and thereafter, as you bring the nut home or you tighten the parts together to bring about a seal, you then get area contact as distinguished from line contact.

The advantages of this feature and the features that I have already referred to will be more fully explained as we develop and explain to your Honor the subject matter of the patent in suit. It is these features, individually and collectively, put into a three-piece fitting for the first time by Parker, that substantiates the fact that Parker made an invention. [16]

He did something that served as a contribution to the art of fittings.

Your Honor will hear the term hydraulic systems of aircraft. Now, these fittings go primarily for use in connection with the hydraulic systems of aircraft, although they are likewise used in many other systems such as the fuel lines, the vacuum lines, the oxygen, and various other parts of the airplane that require tubing, and require likewise fittings.

Your Honor is familiar with what we call the

landing gear mechanism of an aircraft. That is retracted and lowered. It is retracted after take-off; it is lowered just immediately preceding landing. The control of the landing gear mechanism is either under the influence of the pilot or in some of the combat planes it was under the direction of an engineer or an operator, and he controls remotely from the landing gear the actual operation, by which the landing gear mechanism is lowered. Now, we do that or they do that, the aircraft people do that, by a hydraulic system. They have a pump mechanism which pumps fluid through tubing to the place where the landing gear mechanism is and brings about due to the pressure involved the lowering or the retracting, as the case may be.

Now, these fittings, of course, must operate satisfactorily, because if you have failure of a fitting or a leak in [17] this metal to metal joint you then have disaster.

It is sometimes said that in aircraft production you have to be right all the time, you can't be right just part of the time, because it is too late if you are wrong once.

Also, if you have a leak in a fuel line you then have the possibility of fire, and of course that likewise is a hazardous condition when you are going cross-country or involved in combat traveling at 200 and 300 and 400 miles an hour.

Parker having been a pioneer and having grown up with the aircraft industry, and having supplied fittings of a kind to the manufacturers of aircraft

in the late '20s and the early '30s went on and operated a large research and development department so that he might keep apace with progress that was being made in aircraft. And we all know that as the aircraft progressed it became from a single-engine ship to a four-motored, and so on. As the ships, the aircraft, increased in size, the demand and the requirements for a fitting became greater and greater, and the kind of fitting that solved the problem back in the late '20s was not applicable in the late '30s and the early '40s, because it took higher pressures to operate the mechanisms of the various aircraft.

Now, of course you can solve the problem if you want to make a large and heavy fitting, you make the parts withstand [18] high pressures. But of course when you get to the aircraft industry you always think first of how small can we make it, how light can we make it, and yet maintain the strength necessary to do a real job.

Weight is of extreme importance in an airplane, and a fitting, even though it is small as we view them here, many thousands of them are used in aircraft, and thus you have to hold the weight down to the very, very minimum.

It is the pay load in a commercial airplane and the bomb load in a combat plane that counts.

The problem of making a good fitting that would meet all of the rigid requirements meant that the solution thereof was not easy. Parker took to the task and solved the problem. Today the defendants

look upon the solution as a little change. And I say to your Honor, call it whatever you want, call it little things, or call it little changes, yet there is no little thing by way of a change in a fitting, because every change is a big factor towards safety and proper operation. Today the defendants incorporate what they now say are the little things. They must incorporate those features in order to make a fitting that will do the job that will permit airplanes to take off from Los Angeles and land in New York with safety.

We will show, as we progress in our trial, that the Parker fitting, particularly of the kind shown in the Parker [19] patent, soon became recognized as a standard aircraft fitting. The Air Corps recognized it and designated Parker fittings. Then came the period of preparedness immediately preceding World War II, and with the tremendous demand upon this plaintiff here to supply manufacturers of airplanes Parker fittings of the kind, as we will show, involved in the subject patent here involved. As I have said, there were thousands of fittings used upon each plane, and of course planes were in great demand. They served a very definite need, that is, the fittings, and they are the measure in every plane between success and failure. The period of preparedness was soon followed with World War II. We can all remember the hectic days of '41 and '42 when the cry was "More planes, more planes." Parker was unable to supply the heavy demand through its own manufacturing facilities, and in co-operation with the Armed Forces released

for free to manufacturers of fittings, to aircraft manufacturers and those who were helping build up the arsenal of democracy, the right to make the Parker type fittings, yes, all of Parker's products without charge or royalty return, so that more and more Parker fittings might be made for use in helping defeat the enemy.

The plaintiff furnished manufacturing drawings by the thousands without charge, so that others might immediately begin to manufacture fittings, because the demand was so [20] great, and so that such other manufacturers could immediately get into production without going through the labor pains of research and development.

One of the defendants, I think there will be no question about it, in this case, that is, the Masters Company, received prints from this plaintiff of the very fittings here involved, and was permitted to proceed to manufacture such fittings of the Parker kind as embodied in the Parker patent, without any reward or return to the Parker Company, other than the good that we could do to help defeat the enemy.

Now, in December of 1945 that permission was withdrawn after the active warfare with Japan terminated.

The defendants in this case, both started because of the demand for fittings of the Parker kind, they were really put into business because of the necessity for preparedness, they had made available to them shop drawings of the Parker Appliance Company, they had made available to them all of the

research and development of The Parker Appliance Company, so that they could in short over night get into production in the manufacture and sale of aircraft fittings.

They are matters which our proof will develop, and we will show the tremendous amount of research and development done by Parker, the contribution that the Parker patent made, and the impression it made upon the art of fittings for [21] use in aircraft.

We have taken some pretrial depositions of some aircraft engineers, and we will show by such testimony that men skilled in the art, who knew fittings, who knew the early experience in connection with aircraft, recognized the Parker contribution and the benefit that Parker had bestowed upon mankind.

Now, that contribution, your Honor, is defined in the three claims in the patent in suit.

Defendants in this case, as in every patent case that I have been associated with for thirty years, come into court and say Parker made no invention, the patent is invalid, the changes amounted to little or nothing.

Now, the burden of so showing rests heavily upon the defendants. Today the defendants pay tribute to the prior art, but they pay tribute to us by imitating the Parker patent. They have cited some seventeen or eighteen prior patents that we will refer to as the prior art. They say each of these prior patents, some seventeen or eighteen in number, anticipate and negative any invention made by Parker.

Now, that is the usual defense made by a defendant. Now, we will show that those references, the very patents that they now use as anticipating or negating invention by Parker, were actually considered by the Patent Office, by the experts in [22] the Patent Office, who are in position to know, and we will show that the patents which they now have additionally included are no closer, as references, than those that were actually considered by the Patent Office. [23]

In this particular case, as I have said, Parker himself had other patents. Parker himself made other three-piece fittings. When Parker filed the particular application of the patent in suit, he told the Patent Office that this was an improvement over one of his earlier patents. In other words, all of the facts were presented to the Patent Office, so that the Patent Office, with all of that knowledge, with all of that information, determined that the three claims of the Parker patent should be allowed. These are the claims we now charge are infringed by the defendants in their manufacture and sale of fittings, and in some cases—I think one of the defendants here does not now have his own manufacturing facilities, but he has others make the fittings for him or the components that go to make up the fitting, for him. I think that is immaterial.

We have taken some pre-trial depositions of both the defendant Masters and the defendant Collins, and we will show exactly what the defendants manufacture in this case and what they sell.

We will show that men technically trained with

the use of fittings, men who have had great experience in hydraulics and particularly hydraulics for aircraft, all kinds of aircraft, all recognize that the difference in construction, the relationship of parts of Parker fittings of the patent in suit, over that which preceded the earlier devices, was a [24] determining factor in making the fitting commercially successful and as a solution to a longfelt want.

We will show further that the Army, and later the Navy, adopted the Parker fitting as its standard. Your Honor will hear the term AN fitting used. The initial A stands for Army, and the letter N stands for Navy. Hence the term, AN fitting.

The Parker type fitting and the AN flared fitting are one and the same, and we will so show. We will show that during the war when confidential information was gathered as to the facilities of various manufacturing plants for manufacturing the Parker type fitting, in all of the correspondence and in the tabulations made by those that were scheduling the manufacture of fittings, they referred to the fitting that is here involved, the AN fitting, as the Parker type fitting.

Incidentally, I think I can say this without fear of contradiction, Mr. Masters himself would agree that these fittings are generally recognized and are referred to in the trade as the Parker type fittings.

Parker made a very valuable contribution. He made that contribution available at a time when this country needed every ounce of energy it had for its war production. Now that the war is over, plaintiff

is seeking to do with its patent that which it is justly entitled to, and that for [25] which the patent statutes were initially enacted, to reward an inventor for his contribution to the sum of the world's knowledge.

Plaintiff is entitled to the exclusive use of its patent for a limited period of its life. That life is 17 years. Now, plaintiff, starting in 1941 and going on through the war, gave away a portion of that limited life, made it available to others free of any monetary return.

I will show or, as the case progresses, we will show that there was an outstanding licensee, a manufacturer of fittings, a very large company, the Weatherhead Company. It had a license and it paid the plaintiff a royalty. It was obligated to pay plaintiff. When the war came on and when Parker made this available to others, that royalty was cancelled. That company is now a licensee and is now obligated to pay. But from the period of 1941 on and during the hot war, we gave up any kind of return.

Plaintiff, while it might maintain its patent for itself, has seen fit to grant licenses to others, and grant, as I said, a license to a company in Cleveland, the Weatherhead Company. It granted two licenses to companies here on the West Coast, located in the Los Angeles area, and now obtains or gets from those licensees a small royalty return.

I am not going, in my opening statement, to refer to some of the propositions of law which may develop as the [26] trial progresses. We briefly quoted some of those decisions, that is, the cases we rely on,

cases from the Supreme Court of the United States, and particularly those of the Court of Appeals for the Seventh Circuit in our trial brief. Did I say Seventh Circuit? I meant to say the Ninth Circuit, your Honor. We did quote one good case, I think, from the Seventh Circuit, one we were interested in.

I have given your Honor a copy of the trial brief and I have likewise furnished a copy to opposing counsel.

Keeping in mind the remarks your Honor made with regard to not putting anything in that is immaterial, I want to assure your Honor that we are going to endeavor to present the facts of our case as clearly as we possibly can, and we will endeavor to do it in as simple language as we can, so that all of us will understand the problem here involved, and will understand the subject matter of the Parker patent and the contribution made by the Parker patent. Thank you.

The Court: May I ask you a question?

Mr. Freeman: Yes, sir.

The Court: These permits or licenses or acquiescences, whatever they are, that Parker granted, were they granted in writing or was it oral?

Mr. Freeman: No, they were granted in writing. They were acknowledged by the other people. We furnished prints by the hundreds of thousands. [27]

The Court: Is there written evidence as to the relationship between Parker and the defendants?

Mr. Freeman: Yes. The defendant Masters, we have a letter that we will show as to them. I asked

them to produce the original and they haven't produced it, unless Mr. Masters has brought it up here, but we will show definitely that we furnished the blueprints to Masters of the kind here involved.

Incidentally, I can say to your Honor that we took pre-trial depositions and I asked for the production of certain of their so-called active prints from which they made the fittings of the kind here charged to infringe, and one of the defendants produced a Parker drawing as his active drawing, and that testimony was taken pre-trial July 12 of 1949, so I don't think there will be any question on that.

The Court: Does this particular case depend entirely on oral testimony or on written?

Mr. Freeman: No, sir, your Honor.

The Court: It depends on written documents?

Mr. Freeman: Our case here will be 99 per cent documents, with explanation for the other 1 per cent.

The Court: Now, can you tell me when permission was granted to the defendants, was it granted to make the Parker fitting or was it granted to make a Parker type fitting?

Mr. Freeman: Well, it was granted to make a Parker [28] fitting, because we asked them to designate or put their own name on the fitting. We furnished them the prints.

The Court: The reason I asked that is because you have talked about the Parker fitting and then you have talked about the Parker type.

Mr. Freeman: I use those terms interchangeably. It is the Parker type. The defendant may not

go along with that on the question of Parker type or Parker fitting. Of course, we recognize that it is our burden to show that the fitting of the kind that we permitted them to manufacture, that the blueprint and prints we furnished them, embody the subject matter of the patent, and we are prepared to show that.

The Court: Can you tell me, is it the contention of the plaintiff that the Army and Navy in setting up their specifications for airplanes inserted a specification that they were to use the Parker fitting, or was it a Parker type fitting?

Mr. Freeman: They set up characteristics that they wanted in a fitting. As I said, Parker sold fittings for many years, and then Parker came along late in the '30's with the subject matter of this particular patent.

The Court: Well, this fitting manufactured and produced by Parker is known as a Parker fitting?

Mr. Freeman: Right.

The Court: Now, when the specifications were written [29] by the government, did they designate that the fittings had to be a Parker fitting or did they designate that the fitting could be a Parker type fitting, or do you know?

Mr. Freeman: Well, I don't know just what was going through their minds. We have documents here——

The Court: You have the specifications, haven't you?

Mr. Freeman: I know this, your Honor, that when they designated the kind of a fitting that they

wanted, they wanted one that had what we call a differential angle and we know that they wanted the one that had the outside sleeve angle, and when they made all those designations, they spelled out the Parker patent. The government recognized that the fitting that they were specifying as the type that they wanted was a Parker patent fitting, because we gave the Air Corps permission, and we will show that——

The Court: That is true, but you haven't answered my question, except inferentially. I think you have in a roundabout way. They didn't say in their specifications, "We want a Parker fitting"?

Mr. Freeman: No.

The Court: "We want a fitting manufactured by Parker"?

Mr. Freeman: Oh, no, no, no. They didn't say they wanted a fitting manufactured by Parker. They did say, "We want a fitting of the kind, whether made by Masters or Lockheed or Douglas, corresponding to the Parker fitting." [30]

The Court: In other words, what they wanted was a Parker type fitting.

Mr. Freeman: Right.

The Court: It is nearly 11:00 o'clock. I think we will take our morning recess before we hear from the other side.

We will now recess until 10 minutes after 11:00.
(Recess.) [31]

Opening Statement on Behalf of Defendants

Mr. Huebner: Your Honor, this case is starting, as my friend, Mr. Freeman, says, in the usual way.

He anticipates that we will attack his patent on all the grounds given in the book, and he prepares for that by giving us a great big build-up on nothing, which the evidence will eventually show. He did it in a very dignified way, and we must respect and consider everything that he said, but the evidence will show that the glorification which he gave to this patent was not justified.

Our defenses are, first, invalidity of the Parker patent No. 2,212,183; second, that we have not infringed, neither of the defendants have infringed any of the three claims of the patent in suit; and, third, that there has been a probable abuse of the patent rights by the plaintiff. I say "probable" because while our information indicates that there has been an abuse, we will not know until the evidence is closed whether we will feel justified in finally urging that point.

The Court: What kind of abuse do you think the evidence might disclose?

Mr. Huebner: That is ahead of my story, but I will tell it to you now. We think that the evidence will disclose that the operations under the three licenses referred to, namely, Weatherhead, and Mr. Freeman didn't mention it, but I think [32] the others are Pacific Screw Products and the Deutsch Company, both of Los Angeles, that the operations under those licenses have related to acts and things and tribute outside the scope of the patent, and that they have used this patent and other patents for the purpose of establishing a monopoly outside the scope of the patent.

I will revert to that subject.

The Court: I am somewhat familiar with that angle, because I have another patent case in which that is the main issue involved, so I know something of your law points and your arguments and your philosophies in regard to that point.

Mr. Huebner: Well, that is fine. That is not our main point yet, but it may wind up being our main point. [33]

As to the counterclaim, to which Mr. Freeman did not refer, we would like to hold disposition of that until the close of the main case. We, by counterclaim, put into issue two additional earlier Parker patents which, incidentally, are referred to in the license he talks about. We think that the evidence will show that there has been a controversy and that threats have been made or assertions established by which we and our customers, and I say we, meaning the defendants, we and our customers are charged to have infringed these two additional patents. It is quite probable Mr. Freeman will say there is no controversy and also probable he will stipulate or admit that we have not infringed them, but we would like——

Mr. Freeman: I am very happy to make that statement now, that we do not charge them to have infringed or that they are infringing, and we will not assert either of those two patents set up in your counterclaim from now on out. You are free as all outdoors to do as you want.

Mr. Huebner: Against the defendants?

Mr. Freeman: The defendants and their customers. You can go as far as you want.

Mr. Huebner: That will take care of that disposition, except for the formal disposition. We may be entitled to a stipulated judgment if we show during the course of the trial that there was a controversy. Then we can accept Mr. Freeman's [34] stipulation and ask your Honor for a judgment accordingly based on the stipulation. If we don't show that there was a controversy, we may have to be satisfied with a dismissal of our counterclaim conditioned upon the record of his stipulation. I don't know yet.

Now, Mr. Parker was a pioneer, if it is pioneering to engage in the manufacture of a coupling that was known 75 years before he began. Other people, many, many other people, have manufactured couplings over these years. Mr. Parker or his company had the advantage of growing during the war period, and I make that not in the form of an accusation, but here was a demand, a sudden demand, for a lot of these things he had been making——

The Court: Your clients grew during the war, didn't they?

Mr. Huebner: Surely. A lot of people did. So that he isn't entitled to reinforce or expand his patent monopoly by reason of the fact that he was the first when the Army and the Navy wanted some fittings.

The Court: The fact of the matter is, a patent is a monopoly, isn't it?

Mr. Huebner: A patent is a lawful monopoly.

The Court: Nothing illegal about it.

Mr. Huebner: Not in the slightest. A patent is a lawful monopoly and is presumed valid until it is decided to be [35] otherwise.

The Court: I don't want to interrupt you in your statement, but may I ask a question?

Mr. Huebner: Surely.

The Court: You know, unfortunately, when attorneys come before me, they get cross-examined so that I can find out their theories.

Mr. Huebner: That's all right.

The Court: Do you admit that your clients have been making the Parker fitting or is it a Parker type fitting?

Mr. Huebner: It is not a Parker fitting. The so-called Parker type fitting stems back to the days when Parker promoted the Army and the Navy with certain plans and got them to adopt the name, more or less. That is where that comes from. There has been reference to a Parker type fitting, and I think it has been loosely referred to as a Parker fitting. But that doesn't mean it was a fitting under the patents. That was just because of the circumstance that Parker was the first one around when the Army and Navy began calling for these and used that particular name. But more commonly, it was referred to as the AC, and later with a number, AC-11, and so on. Subsequently, and more currently, more in use is the so-called AN fitting, meaning Army and Navy.

The Court: You don't deny, do you, that you got from [36] the Parker Company the right to manufacture or the right to make, or permission, let us say, to make these?

Mr. Huebner: Let me put it this way. Our clients do not recall ever having received a letter from Parker. The facts are, however, no claim was made for infringement during the war period, and there was an acquiescence on the part of Parker in what our clients did.

The Court: I want to know, if I can, whether or not your clients had the permission to make the parker fitting or whether you had permission to make a fitting similar to the Parker fitting.

Mr. Huebner: That is what we had, if anything. If anything, we had permission to make a fitting similar to the so-called Parker fitting. That permission went to whatever the Army or the Navy wanted, or the Air Corps.

The Court: You don't recall or you cannot find in the files of your client, a written memorandum giving them this authority?

Mr. Huebner: We do not and cannot. It may be possible if plaintiff produces a carbon copy and we show it to our client, they may recall, but at this time, your Honor, they do not recall any express permission of that character.

The Court: Can I ask you another question?

Mr. Huebner: Surely.

The Court: In the contracts that your clients got, I [37] presume they got many contracts from various airplane factories for fittings, did these contracts call for the Parker fitting or the Parker type fitting?

Mr. Huebner: Your Honor, they would be ordered from the airplane companies or other cus-

tomers by the government designation. They wouldn't be ordered as fittings either, your Honor. That is another point I will come to, but while we are on it, let's touch on that a little further. [38]

The customers don't order a fitting; they order a nut, or so many hundred nuts of a given Army, Navy, or other governmental designation. The size is specified and reference is made to drawings and standard specifications. Or they may order so many hundred bodies, or they may order so many hundred tubes, and they may order from our clients nuts only, and from another alleged infringer, or licensee, it could be either, so many hundred sleeves to go with what they bought from these people.

The Court: Then these fittings are more or less standard regardless of who made them? They are interchangeable?

Mr. Huebner: Yes.

The Court: That is, they can take a part of your fitting and use it on a part of the Parker fitting?

Mr. Huebner: Absolutely.

The Court: Or the part of some other company?

Mr. Huebner: Yes. And during the war there were, I believe, between two and three hundred, at least, suppliers of these parts which eventually theoretically found their way into an assembly called a fitting.

The Court: Is that a fair statement, that these fittings are interchangeable?

Mr. Freeman: Yes. Because they were made, as I said earlier, the Masters Company used our draw-

ings and still use [39] our drawings, and we asked that they follow our specifications, and they got any of our change orders, so obviously they were alike. Because, and I don't want to argue this, we gave permission, say, to Douglas Aircraft, first we said to Douglas Aircraft, "You can make these fittings for yourself," and we said, "If you make any more than you need for yourself, we will take them off your hands, but you make them in accordance with our specifications." Then that wasn't enough, because as we all know, we had the war period. Then we said to Douglas, "You can make for yourself or procure from others those fittings," and we furnished them with thousands of prints, and we will show that, which prints they then gave to shops all over the Los Angeles area, so that they could get nuts, bodies, and sleeves, so they would have fittings to put on airplanes.

The Court: All right. Now, that leads to another question. I understood a little while ago that you said that you had given prints direct to Masters.

Mr. Freeman: I made that statement, and we will prove it.

The Court: Masters didn't get it from Douglas?

Mr. Freeman: In addition, your Honor, we not only gave prints to companies that we actually wrote them a letter and said, "Here they are," but we also then made, after we did that—like with certain companies, we told those companies [40] that "you are free to go spread these prints anywhere you want to and get these parts made anywhere you want to, just so that we get fittings."

The Court: Excuse me for breaking in, but I wanted to get that.

Mr. Huebner: I think it is helpful.

The Court: I wanted to get clear that these parts were interchangeable between the different manufacturers.

Mr. Huebner: Yes, that is all right. I think it is much better that it be clarified as we go along.

Now, your Honor, just another general comment before I get down to points. Mr. Parker and his company took out many patents, not just the one in suit, but even attached to the complaint, and I am not talking now to thin air, because you can look at an exhibit to the complaint and find a long printed list of Parker-owned patents. He tried to be an opportunist, he was undoubtedly a very fine businessman, and a good engineer, he took out patents on this way of doing it, and that way of doing it, and this way of making it, and that way of making it, so whichever way the wind blew, and it is good business, but it doesn't help him in this case, whichever way the wind blew he could collect if he could.

The Court: There isn't anything wrong to take out as many claims as you want to, is there?

Mr. Huebner: No, that is all right. But I comment on [41] that merely to indicate as the case progresses that what he has here in issue and makes so much about is a little insignificant thing, one of fifty that he had, so that he could try to catch something as the wind blew.

The Court: I wonder if I could ask learned counsel a question. We have some very learned

counsel in this case who evidently know a great deal more about patent law than maybe I will ever know. When an application is made for a patent, there is evidently a very extensive investigation made by the Patent Office, and they consider the prior patents, the patents that were granted prior thereto, and the claims thereon, and then they come up with an answer, either they say you cannot get a patent because someone else has a patent, or this has been patented for a long time, it is in the public domain, and so forth and so on, or they say you can get a patent and they give you a patent. Is there any weight given to the finding of the Patent Office?

Mr. Huebner: Not much any more. There used to be.

The Court: Does the court have to follow the findings of the Patent Office?

Mr. Huebner: No, sir. At least half of the courts don't. If I may reply to that suggestion. First of all you file your patent application and the examiner on his first search does probably a cursory job. They are under-staffed, they have a lot of work to do, their quarters are stuffy, [42] even though they occupy eight acres in the Commerce Building, and the working conditions aren't good, but they go to their stacks and they dig out what patents they think are pertinent and cite them. Then we go back again, the attorney maybe changes the language around, and sends in what we call an amendment or argument, and eventually there is built up what we will refer to, and your Honor probably has heard referred to, the file wrapper.

Somewhere along the line there the examiner should make a good search, and they conscientiously try to do so. So often they miss more pertinent art than they cite. Over and over again that happens. Their time is limited, the human equation is involved. They render their quasi-judicial decision as a Patent Office examiner, and out of that comes a patent. Quite often you don't get your patent until you more or less wear the examiner down, you go back there and talk to him and sit down with him and argue with him, as well as write letters to him, formal letters. Eventually if you can convince him that perhaps you have something there, he will give you the allowance, because he knows if he has made a mistake a court will eventually rectify it. And if you compare the decisions by the Supreme Court, you will find probably half or more of the patents before that court have been held invalid, which overrules, of course, the Patent Office examiner. And throughout the other Federal Courts you will find a very [43] large proportion of patents overruled.

There was a time when that rule that a patent is presumed valid until declared otherwise was given a lot of weight. It still is a rule and it is still followed by our Ninth Circuit. But it isn't given the same emphasis; it isn't given the same standing that it used to have.

The Court: Can I ask you this: Is it still the rule in this Circuit that the patent is presumed valid unless the one who attacks the patent can

prove to the contrary by a preponderance of the evidence?

Mr. Huebner: You don't need the word "preponderance" in there.

The Court: You don't?

Mr. Huebner: The rule is correct except for the word "preponderance."

The Court: What word should be used?

Mr. Huebner: Just leave it out.

The Court: Well, the burden of proof is upon the attacker?

Mr. Huebner: All right, the rule is correct that the patent in this Circuit is presumed valid until otherwise proved, and the burden of proving it invalid is upon the defendant. But that burden may be exercised in numerous ways, and introduction into evidence of a single patent would be [44] sufficient.

The Court: I am not talking about how you are going to get around that. But if I were to determine in my own mind, after hearing all the evidence and all the arguments of learned counsel, that the scales are equally divided, however the defendant, the attacker, has not been able to sustain the burden of proof——

Mr. Huebner: You have got to go, then, for the plaintiff.

The Court: And I have decided a lot of cases on exactly that theory, that the burden of proof is upon the plaintiff or defendant, whatever it might be, and if they cannot sustain their burden they are not entitled to recover.

Mr. Huebner: That is sound judicial policy, but there is another burden I will get to, and that is the burden of proving infringement. We have the burden of proving the patent is invalid, but he has the burden of proving infringement. So he has the same effort to show we have infringed that we have to show that his patent is invalid.

The Court: If he produces a patent, theoretically that patent is good until you can show the court to the contrary?

Mr. Huebner: Yes, sir.

The Court: All right. He produces the patent, you have admitted the patent is here, now you say the patent is invalid, the burden of proof switches to you to show it is invalid? [45]

Mr. Huebner: On that issue only.

The Court: On that issue only?

Mr. Huebner: That's right.

The Court: As far as infringement, don't you admit that you have been making exactly the same article?

Mr. Huebner: No. I didn't get to that yet, but we absolutely deny it. [46]

The Court: Although they are interchangeable, they can be used part by part, nevertheless they are not the same?

Mr. Huebner: Mr. Freeman, in his nice way, put one over there. I mean in a very proper way. He tells you—I am not saying you didn't do it properly.

The Court: This is not critical, you understand. This is just friendly.

Mr. Huebner: This is just a friendly discussion. He told you the Parker fitting manufactured for the government, or the parts that made it, were identical with the patent. I say he is all wrong on that and that is part of our case. Surely, the commercial items manufactured by Parker and the commercial items manufactured by both defendants here are interchangeable, but neither of those commercial items fall under the scope of the patent, and that is going to be one of our contentions.

The Court: That is fine. Now I am finding out what the issue is.

Mr. Huebner: Shall I give you——

The Court: You can go ahead with your brief.

Mr. Huebner: All right. One reason I didn't file a trial brief is that rule has been more or less dormant here, unless counsel was asked by the court to do it, and I apologize for not having filed one in advance.

The Court: Plaintiff's attorney asked me if I would [47] like to have one and I said yes. I am quite sure if the defendants' attorney had asked the same question, they would have received the same answer.

Mr. Huebner: I will try to supply that same thought then in this statement.

Referring now, first, to the question of validity, wherein we attack the validity of the patent, we have several points, your Honor. The first point is this, that the description in the specifications and in the claims is inadequate, it is insufficient, and inadequate to properly explain the asserted inven-

tion as required by the law, and that the claims are uncertain and indefinite, ambiguous and functional, and that makes the whole patent invalid. The basis for that point is as follows: Revised Statutes, Section 4888, which is 35 U. S. Code 33, reads as follows, the pertinent part is as follows:

“Before any inventor or discoverer shall receive a patent for his invention or discovery he shall make application therefor, in writing, to the Commissioner of Patents, and shall file in the Patent Office a written description of the same, and of the manner and process of making, constructing, compounding, and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art or [48] science to which it appertains, or with which it is most nearly connected, to make, construct, compound, and use the same; and in case of a machine, he shall explain the principle thereof, and the best mode in which he has contemplated applying that principle, so as to distinguish it from other inventions;”

There is a semi-colon there. That relates to the descriptive part of a patent. Then the statute continues:

“and he shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery.”

Way back in the early days, the Supreme Court explained the reason for those requirements in

Bates vs. Coe, 98 U. S. 31, 25 Law Edition 68, that an "accurate description of the invention is required by law, for several important reasons: (1) That the government may know what is granted and what will become public property when the term of the monopoly expires. (2) That licensed persons desiring to practice the invention may know, during the term, how to make, construct and use the invention. (3) That other inventors may know what part of the field of the invention is unoccupied."

They cited there another rather important early case, Gill vs. Wells, 22 Wall 27. [49]

Later on, in O'Reilly vs. Morse, there was a claim considered by the Supreme Court, which read as follows:

"I do not propose to limit myself to the specific machinery or parts of machinery described in the foregoing specification and claim; the essence of my invention being the use of the motive power of the electric or galvanic current, which I call electro-magnetism, however developed for marking or printing intelligible characters, signs, or letters, at any distances, being a new application of that power of which I claim to be the first inventor or discoverer."

Now, that claim was held bad. It was functional. It didn't particularly point out and distinctly claim the invention.

Another early case dealing with this doctrine that

the claims must be definite, clear, and unambiguous, which has been consistently followed by the Supreme Court, is *Merrill vs. Yeomans*, 94 U. S. 568, where they said at page 573:

“The developed and improved condition of the patent law, and of the principles which govern the exclusive right conferred by it, leaves no excuse for ambiguous language or vague descriptions. The public should not be deprived of [50] rights supposed to belong to it, without being clearly told what it is that limits the rights. * * * It seems to us that nothing can be more just and fair, both to the patentee and to the public, than that the former should understand, and correctly describe, just what he has invented, and for what he claims a patent.”

That case has been followed many times, and in the more recent case of the *Permutit Company vs. Graver Corporation*, 284 U. S. 52, at page 60, the Supreme Court made this statement:

“The statute requires the patentee not only to explain the principle of his apparatus and to describe it in such terms that any person skilled in the art to which it appertains may construct and use it after the expiration of the patent, but also to inform the public during the life of the patent of the limits of the monopoly asserted, so that it may be known which features may be safely used or manufactured without a license and which may not.”

The Court: Now, right there, may I interrupt and ask you a question?

Mr. Huebner: Yes, sir.

The Court: Assuming that is the law, and I know it is [51] rather dangerous at the beginning of a lawsuit to assume anything is the law, until we hear how it is applied, but assuming that is the law, has there been any case in which the claims of the Parker patent have been passed upon by the court?

Mr. Huebner: None that we know of. We have researched it. We do not find the Parker patent having been litigated to any decision.

The Court: Is that correct?

Mr. Freeman: That is correct, your Honor. This is the first one.

The Court: This is the first patent case on this?

Mr. Freeman: This is the first patent case involving this particular patent.

The Court: I thought maybe I might get out of deciding that point by bowing to the decision of some other court:

Mr. Huebner: By following a precedent. I will develop that, though, a little further, your Honor, because it comes right down to current date. The controversy of that type, so far as it applies to a product, was finally settled by the decision of the Supreme Court in *General Electric vs. Wabash Appliance Corporation*, 304 U. S. 364, in which Mr. Justice Reed, speaking for the court, said this:

“But the vice of a functional claim exists not only when a claim is wholly [52] func-

tional, if that is ever true, but also when the inventor is painstaking when he recites what has already been seen, and then uses conveniently functional language at the exact point of novelty.”

Going back, your Honor, I might say that a functional claim or a functional clause is language which says what the thing will do and not what it is. In other words, you have a structure. You have a body and a sleeve and a nut, and so forth. Our point, as it will develop during the trial, is that in the claims he talks about what those things will do and not what they are. He uses functional language to attempt to define the invention, and in so doing he has lost his entire monopoly.

The claim which was under consideration, or a typical claim under consideration in that case from which I just quoted related to tungsten filaments for incandescent lamps. The claim read as follows:

“A filament for electric incandescant lamps or other devices, composed substantially of tungsten and made up mainly of a number of comparatively large grains of such size and contour as to prevent substantial sagging and offsetting during a normal or commercially useful life for such a lamp or other device.”

That claim was thrown out by the Supreme Court. That [53] has a great deal of similarity to all three claims in the patent in suit. To go one step further, counsel may say that related to a

product claim and not to a machine or apparatus or a device such as these fittings.

That question was resolved in an apparatus claim in the case of Halliburton Oil Well Cementing Company vs. Walker, 329 U. S. 1, where the Supreme Court, speaking through Mr. Justice Black, stated as follows:

“The language of the claim thus describes this most crucial element in the ‘new’ combination in terms of what it will do rather than in terms of its own physical characteristics or its arrangement in the new combination apparatus.”

* * *

The General Electric and the Halliburton cases in holding the patent there involved to be invalid, emphasize that the violence done is in using functional language to describe the main feature of the invention, and that is just what they have done here. I may be confronted, your Honor, with a comment by my brother at the bar that I criticized this Halliburton case, and I did and I still do, so far as the general treatment was concerned, because I tried in the case of Faulkner vs. Gibbs, 338 U. S. 267, decided in November, 1949, to get the Supreme Court to set aside or overrule or clarify their Halliburton decision. They did not overrule [54] it. They did not set it aside, but they clarified it in the way we asked for in holding that a combination claim, such as involved in the Gibbs patent, was good and should be sustained, but they

did not overrule this earlier proposition that where you have a crucial element and you use functional language to define that crucial element, which is the crux of the invention, your patent is no good, so that law still stands.

The Court: What is the citation on the Halliburton case?

Mr. Huebner: 329 U. S., page 1. Of course, Halliburton is referred to in *Faulkner vs. Gibbs* in 338 U. S. 267.

The Court: 267?

Mr. Huebner: 267. Of the patents held invalid by the court, in spite of the patent officer examiner's rulings, there have been many reasons justifying it. For example, the patent examiners may have been in error in deciding that the claimed subject matter avoided the prior art and involved invention, or there may have been error in that the patent officer examiners may not have had before them citations of prior art which, if they had seen them, would have been the basis for rejection. In the present case, we have a book, which will be offered to your Honor, published in 1902, with a fitting illustrated in it, and the illustration of [55] 1902 looks exactly like the drawing in my friend's brief, which he says are Parker fittings, and which he says are also illustrative of the defendants' accused fittings. So the Patent Office didn't have before it that particular publication. If they had, I don't think they would ever have granted the patent. That is just another reason why the Patent Office could be in error.

Then, too, the Patent Office can be in error in accepting the claims as conformed, which they did in this case, because the claims were functional in character, and in such respect were broader than whatever invention, if any, Mr. Parker made.

There is one other possibility of invalidity of the patent, which we haven't fully explored, but which may develop during the trial. This patent may be invalid because claims were added. I will go back and explain that. The application for the patent was allowed with one claim. Mr. Parker apparently thought so little of it, although he had a lot of other things in the fire, that he didn't pay the required fee to the Patent Office and his patent application became abandoned. At that time there was a rule in effect that there was a right within one year after such abandonment to pay a new filing fee and have the application renewed. He did that, but in doing that, he was not satisfied with his one claim and he put in some other additional descriptive [56] matter in the specifications, and he also wrote two more claims and argued those. There is some law to the effect, and I will try to brief it before the trial is concluded or shortly thereafter, some law in effect where to add material later, to add claims, makes your whole patent invalid, because you have no right to do that under the rule giving you permission to revive.

The Court: Can I ask you a question?

Mr. Huebner: Yes, sir.

The Court: When you get permission to revive a patent, do you have, also, permission to do any-

thing you could do under the original application?

Mr. Huebner: I won't say categorically no, but I don't think so. It is a remote point, and the little bit of law I have been able to check on that would indicate that you can't do anything you could have done with the original, that when you add new matter or new claims, you change the character so that you are then seeking a patent for what they call a different invention.

The Court: All right. When the patent is granted under those circumstances, do your rights under the patent, under the one claim, for instance, revert back to the original filing?

Mr. Huebner: No, sir.

The Court: Or do they revert back to the amended filing [57]

Mr. Huebner: All claims revert back to what you call the amended filing, so the patent is either all bad or it is not hurt by that tactic.

The Court: I don't assume that opposing counsel will agree with the theory of the present counsel as to the amendment?

Mr. Freeman: Absolutely not, your Honor. We just followed the statute, the right provided for in the statute.

The Court: You know, if you just follow the statute, some court will tell you some day you are out on a limb because the statutes don't give you the rights that you might think.

Mr. Freeman: We think we had the absolute right. We paid the fee and we proceeded in the Patent Office in accordance with the rules and regu-

lations of the Patent Office, and those rules and regulations were in accordance with the then existing statute.

The Court: Is there any dispute then as to the facts?

Mr. Freeman: No. It shows on its face that the case was renewed.

The Court: The case was renewed?

Mr. Freeman: Oh, yes. It shows right on the face of the patent. [58]

The Court: Can you state to me, upon a renewal of the patent, do the rights thereunder revert back to the original filing?

Mr. Freeman: To the original filing date.

The Court: To the original filing date?

Mr. Freeman: Yes, sir.

The Court: Then you don't agree with Mr. Huebner?

Mr. Freeman: No, sir. It is the same as making an amendment. You can make an amendment from time to time, and if the claims are supported on the original showing of the application and the drawings, then you revert back to your initial filing date.

Mr. Huebner: Well, Rule 176 then in force of the Patent Office rules provided to the contrary.

The Court: That is a question we can thresh out during the course of the trial.

Mr. Huebner: Yes, but there are one or two cases dealing with it. [59]

The Court: I want to know whether or not there can be any agreement as to counsel on this matter.

Mr. Huebner: Only as to the facts, I guess.

Still talking about validity, when a plaintiff has a thin patent he usually tries to reinforce the presumption of validity—I say “reinforce the presumption of validity”—by showing several things. One of them is that there has been a wide commercial acceptance of the invention. That is proper proof if two conditions are met. First, if the thing which has been commercialized is identical with the patent and can stem from the patent; and, second, such proof is available, or at least should be considered by the court only when invention may be in doubt. If the court is firmly of the opinion that the patent did not involve invention, commercial use will not turn the scale in favor of the patent. It is just sort of a little tiny added weight that the court may give if he feels that otherwise the scales are balanced, and if there has been a wide commercial use of the exact thing of the patent, then he may say, well, that adds to the presumption and we will hold the patent valid.

The Court: Now, can I ask you a question right there? From the statement made by counsel it appears that there have been many parties who attempted to patent a fitting. Even Mr. Parker on many, many occasions attempted to perfect a fitting that would be entirely satisfactory. [60]

Mr. Huebner: Yes.

The Court: Finally they came around to this fitting which was immediately adopted by the trade or the manufacturers. Isn't that an indication that there was something new here that the trade recognized and started to use?

Mr. Huebner: Yes, as far as you go, your Honor, I would agree that the fact that it was adopted would indicate to some extent that it was a pretty good thing at that time, that is, what you are holding in your hand, or let us say, the Parker-manufactured fitting, but not the Parker patent. The physical thing manufactured by Parker under the Army, Navy, and Air Corps requirements would have to be satisfactory as of that date, or it wouldn't have been adopted. Perhaps it was promotional in part on the part of Mr. Parker, legitimate promotion, perhaps it was a good thing, but anyway that still doesn't help support the patent unless that thing is identical with the patent.

The Court: Can I break in just a minute and ask opposing counsel this question: You don't agree that the thing that you manufacture is not the thing that you describe in your patent?

Mr. Freeman: I certainly do not agree with them. It is our position, and we will show that the thing that I gave you, a Parker fitting, consisting of nut, body and sleeve with a piece of tube in it, follows exactly the Parker [61] patent in suit. I recognize that we must show that, and we are prepared to meet that burden, as I stated in my opening statement.

The Court: All right.

Mr. Huebner: Then the case I was going to cite is probably academic, but here is the point judicially ruled on:

“Commercial success to be proof of anything must be confined to the exact thing disclosed by the patent.”

Haggerty, et al., v. Rawlings Mfg. Co., 14 Fed. (2d) 928 at page 930, an Eighth Circuit Court of Appeals case.

The Court: I don't think there will be any question here from opposing counsel, that if you can show that the thing that was manufactured, or this little gadget I have here in my hand, is not the thing described in the patent, then the case just falls.

Mr. Freeman: That is a correct statement, your Honor, and we recognize that; and we recognize that the burden is upon us to show that the thing that you have in your hand, which I gave you, is the patent in suit.

The Court: So, Mr. Huebner, I don't think you are going to have to worry about proving that point. They are willing to admit that if you could prove that the thing they manufactured is not the thing they describe in the patent, then [62] they have no standing.

Mr. Huebner: Then my Supreme Court case that I was going to cite doesn't even need to be in the record, but if you want it for reference it is *Cuno Corp. v. Automatic Devices Corp.*, 314 U. S. 84 at page 93.

The next point that Mr. Freeman will probably try to use to reinforce, as he has indicated, the presumption of validity, is the showing of so-called acquiescence in the plaintiff's patent by proving three licenses that have been granted under the patent in suit. We are not going to stand on tech-

nicalities as to proof. If Mr. Freeman produces copies and represents here that these are true copies of three licenses which were entered into on their respective dates, and which are now in force and effect, we won't put him to proof of signatures and all that unnecessary data.

Mr. Freeman: They already have been made available to you in accordance with a request that we have them here, and they will again be made available to you.

The Court: Now, may I ask opposing counsel a question? I don't assume that you are going to contend, you may contend, but I don't assume that you are going to contend that because you allowed the defendants to manufacture these fittings, that they are now estopped from denying the validity of your patent?

Mr. Freeman: Not at all, no estoppel. We only make [63] the point that they recognized the contribution.

Mr. Huebner: We have seen, I have personally seen, a copy of a license to Pacific Screw Products. I have not seen one to the other asserted licensee, and I have not seen one to the Weatherhead Company, but we will be glad to look at them and let them go in. But that won't be enough. Just the pure paper with the typewriting on it won't mean anything.

To be of any value Mr. Freeman is going to have to show that the licensees are operating under those licenses, and that they are paying royalties under them. Just the granting of a license has no

valid effect. So he has got to show use under the licenses, to reinforce his so-called validity, and he has got to show that that use is the exact thing in one, at least, of the patents involved in the licenses.

The Court: Now can I ask a question? I am being educated at the expense of the attorneys, I guess. Supposing that I had a so-called patent upon a gadget, let's call it a gadget, and I went out to ten manufacturers and I licensed nine of them to manufacture it, the tenth I didn't license; now, can I prove my case by showing that I licensed nine, so as to affect the rights of the tenth?

Mr. Huebner: I am not sure that I get your Honor's thought. Can you prove your case——

The Court: You have raised the issue here that certain licenses have been given to what was it, Screw Products Company? [64]

Mr. Huebner: Pacific Screw Products Company.

The Court: Pacific Screw Products Company, and a half dozen other individuals.

Mr. Huebner: Two others. Three licensees.

The Court: All right. Can they show that they have licensed these three manufacturing companies under this patent to establish their rights against the defendants in this case?

Mr. Huebner: It is not as broad——

The Court: Are the defendants jeopardized in any way because this license was granted to these three other individuals?

Mr. Huebner: No, your Honor, not the way you have stated it. Maybe I can clarify it. The defendants are not jeopardized in any way at all because

of the granting by Parker of the other three licenses.

The Court: Can they introduce these other three licensees as an argument to substantiate the fact——

Mr. Huebner: As an argument to substantiate the fact that their patent is a good patent.

The Court: That is possible, is it?

Mr. Huebner: Yes, that is right, they have a right to do that. But it must be conditioned and qualified as follows: In order to make use of that point, which was merely another reinforcement of their patent, they have got to show, first, that the licensees are actually manufacturing under the [65] licenses and paying royalties.

The Court: Supposing they granted Pacific Screw Products Company a license, and they never manufactured at all?

Mr. Huebner: It wouldn't have any value at all from an evidentiary standpoint, it wouldn't have any probative value. Just the granting of a bunch of licenses doesn't mean a thing.

The Court: But the granting of the license would mean this, that the Pacific Screw Products Company recognizes the patent?

Mr. Huebner: No. The Pacific Screw Products Company, to use an exaggerated situation, might not even be in the business of making fittings, but might put its name to a piece of paper so that the plaintiff could say, "Well, we granted Pacific Screw a license," and corporations 1 to 10 could do the same thing, and not even be interested in the license.

The Court: Do you agree, Mr. Freeman, that you have to go as far as Mr. Huebner says, that is, prove that they actually manufactured?

Mr. Freeman: No, I don't think you have to prove that they actually manufactured, and I think it goes to the weight of the evidence or the credit that you give to those licenses. Now, of course, as he said, you could go out and license 100 companies, and if they never manufactured, never [66] paid a dime, never obligated themselves, then you might build up something that has absolutely no value as evidence. But we are prepared to show that in this case when they signed the agreements they obligated themselves for \$37,500 each. I am talking now about the cases here on the West Coast. And you do not obligate yourself to pay that kind of money——

The Court: Supposing they obligated themselves to pay that kind of money and they actually paid it, but they didn't manufacture it?

Mr. Freeman: That wouldn't make any difference. Incidentally, one of those companies that he is speaking of does manufacture. The other one for some reason, they got into a little income tax problem, and why they didn't go ahead, I don't know, but it goes to the weight.

The Court: You disagree, then, with Mr. Huebner's statement that you have to show not only do they pay the royalty, but that they manufacture? That is my understanding of his statement.

Mr. Freeman: He doesn't go that far.

Mr. Huebner: I say to have probative value for

their point, they must show manufacturing under the patent, and that the manufacture is of the exact thing covered by the patent.

The Court: We have all agreed if they can't show the thing manufactured was according to the claims in the patent, [67] they have no standing in this court. That not only goes to the Parker Company, but it goes to every other company. Of course, if you can show that the thing that you manufacture is not according to the patent, then I don't think they can get a judgment against you. That is really one of the main issues in this case.

Mr. Huebner: Yes, it is one of the two main issues. It is enough of a main issue that if the court were to decide we don't infringe, that could dispose of the case. But unfortunately the District Courts are enjoined nowadays to decide, also, whether the patent is valid or invalid.

I don't, sometimes, like the necessity of it, but the higher courts have suggested that there should be a decision on validity or invalidity, also, for the benefit of the public. But that is another question.

The Court: I think the upper courts want to give the litigants a reason for appealing.

Mr. Huebner: Now, there is one further burden that Mr. Freeman will have in connection with his licenses. He is going to have to answer this point of law, and maybe it will involve fact. These licenses, the one I have seen, at least, is granted under three patents, the one in suit and two other patents, and it says, also, that the licensees get improvements.

Since that date some more patents have come out, so that [68] before we are through we will probably show those licenses were granted on half a dozen or more different patents. Now, that doesn't help him one iota, because the Second Circuit Court of Appeals has said this:

I don't have the exact language, but this is the point:

“Where license agreements offered as evidence of commercial success extend rights under other patents, as well as the patent in suit, it cannot be successfully urged that the commercial success upon which the plaintiff relies is ascribable to the patent in suit.”

Cleveland Trust Co. v. Osher & Reiss, 109 Fed. (2d) 971. Mr. Freeman, I think, participated in that.

The Court: How much longer are you going to take on your opening statement?

Mr. Huebner: I should like to have, your Honor, another fifteen or twenty minutes. I had it figured for about an hour or about 50 minutes, but I didn't think that we would have so much general discussion, but I welcome it.

The Court: I think if you are going to take another 15 or 20 minutes that we had better continue after recess. So we will now stand recessed until 2:00 o'clock this afternoon.

(Whereupon, at 12:00 o'clock noon a recess was taken until 2:00 o'clock p.m. of the same day.) [69]

June 14, 1950—2:00 P.M.

The Court: You may proceed.

Mr. Huebner: I would like to refer to one final point on the question of validity and then mention a few things in connection with infringement. The plaintiff urges by way of reinforcing this question of validity that the patentee, Mr. Parker, solved a long felt want that had confronted the industry for many years. That is an exaggeration. In the first place, the fittings had been known for many years and they were satisfactory. The Air Corps had had one type of a fitting for their hydraulic systems in airplanes, and the Navy had had another kind of a fitting, and they all worked, the planes flew, and the accident rate was no worse than it was after the so-called AN standard was adopted. But the government decided it would be better to have all parts interchangeable between all the planes of all the forces, all the military forces, so they adopted this AN standard. It was not Mr. Parker who made the AN standard or who solved a longfelt want. The longfelt want did not exist, because fittings had been available in various forms to perform the functions. It was merely a standardization program that gave Mr. Parker, who had the manufacturing facilities, an opportunity to plunge in, and he manufactured for the government all he could to the extent of his facilities, [70] and there were planes sitting on the ground waiting to have these new standard designs put in, and he couldn't make enough of them, so he was compelled

to acquiesce in another two or three hundred manufacturers supplying the government.

That wasn't any nice attitude on his part. It was simply that he had no alternative.

The Court: Well, the government could have taken over his patent and paid him for it.

Mr. Huebner: The government could have done that.

The Court: And then could have passed out this license to everybody, if they wanted to.

Mr. Huebner: Well, that was not the way they preferred to operate it.

The Court: There is no question the government could have taken it, if they wanted to pay for it.

Mr. Huebner: Yes, the government could either take it and pay for it under the agreement, or the government could say to its contractors, "You furnish these things to me and let the patent owner have resort to the Court of Claims."

As I say, there were lots of fittings available. The Germans flew pretty good planes and they didn't have Mr. Parker's patent or a Parker fitting made by whomever it might have been. As a matter of fact, I think the evidence will show, if it comes up, that the German planes used a flareless type fitting, a good many of them did, and even our [71] own aircraft industry today is seriously considering going over to that type of fitting, so that the Parker so-called fitting, which was actually a government standard, was no panacea. [72]

All right. Now, actually the standard fitting which was adopted from a drawing standpoint and

illustration doesn't look any different from the one I am holding up to your Honor, and which will be later offered in evidence. This fitting here, for example, has a body on which there is a nose. Mr. Freeman has seen this, I assume. It is pleaded in the answer. This illustration is half in cross-section of a complete assembly. If you duplicated this part down below, you would have a cross-section of a complete assembly. So here you have a body, which is threaded on the outside, here you have a flared tube colored yellow, which is seating against the tapered part of the body. Here you have a sleeve, which has a shoulder on it, and also a flared tapered countersink to fit against the flare of the tube. And coacting with the sleeve, contacting at the shoulder, you have a nut shown in blue, which is engaged with the body, and when you tighten it up you get a fitting.

If you look at the drawings in Mr. Freeman's trial brief, which he says followed the patent, and are the same as that manufactured by everybody, and you look at this, you won't see much difference. This was known in 1902.

Now, to the question of infringement. First of all, plaintiff must show that the defendants in this case manufactured and sold complete fittings, which are substantially identical to the structures defined in the claims of the [73] patent. The evidence will actually show that the defendants didn't make complete fittings, they made merely parts. For the convenience of the court and to illustrate the points that are necessarily involved, both counsel for plain-

tiff, I presume, and counsel for defendants, will submit drawings showing complete assemblies. That is for the purpose of illustrating the cooperative relationship of the several parts that have been made for the purpose of assembling. But the use of those drawings on our part will not be an admission that our clients have ever made and delivered assemblies as such. They must take the burden now of showing that we have done that in order to sustain—it is one of the things that they have to do to sustain their contention of infringement.

Moreover, comparison of the defendants'—I will just hit this briefly—comparison of our commercial devices with the commercial Parker fittings is not relevant or material, and does not constitute the test as to whether or not we have infringed.

There is lots of authority for that.

I don't believe it is even necessary to be cited, but I have here one quotation from the Eighth Circuit Court of Appeals:

“In considering the question of infringement we must compare the accused product or device with [74] the teaching of the patent in suit as disclosed by the specification and claims, rather than with plaintiff's commercial device.”

S. S. Kresge vs. Davies, 112 F. (2d) 708.

In construing the Parker patent it must be borne in mind that the claims measure the invention. That is an axiomatic rule that I am sure there will be no dispute on.

It isn't the specifications. That is the descriptive

part of the patent which defines a contract. That gives you the background by which you interpret the claims, and it is the claims and each one of them taken separately which is the measure of the invention, if any.

Now, the limitations in the claims, that is, the restrictive features or descriptive parts of the claims, must be carefully regarded. That is particularly true where the claims were amended by insertion of these limitations during prosecution of the application in the Patent Office. And reference will be had during the trial to what we call the file wrapper, as I mentioned a while ago, showing the case as it was originally presented to the Patent Office, the changes that were made, and the whole history, so that everything in those claims that was inserted by limitation must be doubly scrutinized.

It is axiomatic, also, that when a patent applicant cancels claims or amends them in response to a rejection by the [75] Patent Office examiner, and thus limits his claims to specific features, he can never hold as an infringement the subject matter which was rejected and canceled.

There is a doctrine which will probably be brought up, known as the doctrine of the range of equivalents. That is to say if the accused device does substantially the same thing by substantially the same means in substantially the same manner as the claims of the patent, it would be an infringement. That is the doctrine. But that doctrine is variable according to the advance made by the

patentee in the art. If his invention is broad, he is entitled to a wide range of equivalents. That is, more variation in the allowable substitutions of parts. But if his invention is narrow, as this one is, extremely narrow, if there is invention, a very minor step forward, the range of equivalents will be narrow, and in the present case is so limited that only an identical copy could possibly infringe, even if the patent is valid, and we do not have an identical copy.

It is further axiomatic that every element as described in the claims of the patent must be found in the accused device if infringement is to be **held**. If any element be omitted or any element be different than as described in the claims of this Parker patent, the defendants' device should be held not to infringe.

Now, getting to the next part in connection with infringement, [76] I want to refer for just a moment to contributory infringement. This involves the principle that he who manufactures only a part of the patented structure or combination, knowing it to be intended for incorporation with other parts which will finally result in an assembly or a completion of the patented item, is guilty of contributory infringement. That is the general rule.

It has been more or less waived aside by the Supreme Court recently, but there is no direct holding ruling out the principle, so we may consider it for a moment. The reason for it is this: There can be no contributory infringement unless there is a complete infringement proved.

I don't know what type of evidence the plaintiff may offer in that connection, but if he merely shows that our clients have manufactured isolated parts, even though they may know that those parts were to subsequently be assembled by someone, he can't prevail in this case; he has got to show, in order to even sustain this case, that there was a completion of the infringement somewhere by someone.

Now, in connection with contributory infringement we come to the final point that I would like to mention at this stage of the trial, and that is again the abuse of the patent rights.

There is law to the effect that the patent rights have been abused by the plaintiff in the very act of filing and [77] pressing to trial these two suits for infringement against contributory [78] infringers.

It may be good law, it may be bad, but there is law in this district to that effect. Before the trial started, I handed to counsel for the plaintiff a photostatic copy of a decision reported in the Patent Reporter, and I would like to offer to your Honor a copy, because the case is not reported in the Federal Reporter. I refer to *Stroco vs. Mullenbach*, and others, decided July 25, 1944, by Judge Hollzer, then District Judge of this district.

In that case, the plaintiff had sued some parties who made parts, knowing they were going to go into an assembly which would have ultimately infringed, and the defendants even gave directions as to how the purchaser could finally put the thing together and make what would be then under the

patent. Judge Hollzer said, "You have no right to do that and remain here in court."

There was a motion brought for a summary judgment, a motion brought by the defendants for a summary judgment. Judge Hollzer first denied the motion, and then came down the *Mercoid* decision. I had better cite that for the record. That is *Mercoid vs. Mid-Continent Investment Company*, 88 Law Edition 272, and *Mercoid vs. Minneapolis-Honeywell*, 88 Law Edition 273. Those are leading cases on this doctrine of abuse of patent where contributory infringers and licensees who make only parts of the thing are involved. So Judge Hollzer first denied that motion, and then came down [79] these Supreme Court decisions, and the motion was renewed, and Judge Hollzer then said under the ruling of the *Mercoid* decisions, he would dismiss the complaint, because the plaintiff had abused the patent right by bringing suit against contributory infringers.

So it may be that in this case here, before we are through with the evidence, the circumstances will be such that this court could, under the authority of the decisions cited, consider dismissing this complaint.

The Court: You may call your first witness.

Mr. Freeman: I should like to offer in evidence as Plaintiff's Exhibit No. 1, a copy of the **Parker** patent in suit, Patent No. 2,212,183.

The Court: It may be received.

The Clerk: No. 1.

(The document referred to was received in evidence and marked as Plaintiff's Exhibit No. 1.)

Mr. Freeman: I should like to offer in evidence as Plaintiff's Exhibit No. 2, a catalog of the defendant Irvin W. Masters, Inc., dated 1946. This is a catalog which was furnished to me in response to a request for literature put out by the defendant.

The Court: It may be received.

The Clerk: No. 2. [80]

(The document referred to was received in evidence and marked as Plaintiff's Exhibit No. 2.)

Mr. Freeman: I should like to offer in evidence as Plaintiff's Exhibit No. 3 a catalog of the Collins Engineering Company, which was furnished to me in response to a request to the defendant Collins Engineering Company and which during the taking of the pre-trial deposition was identified as Plaintiff's Exhibit No. 11, but I should like to offer it in this case as Plaintiff's Exhibit 3.

The Court: It may be received.

The Clerk: No. 3.

(The document referred to was received in evidence and marked as Plaintiff's Exhibit No. 3.)

Mr. Freeman: I should like to offer in evidence as Plaintiff's Exhibit No. 4 a catalog of the Collins Engineering Company, which was likewise furnished to me in response to an inquiry or request made that the defendant produce literature. At the pre-trial, it was identified as Plaintiff's Exhibit 12.

I should like to offer it in evidence here as Plaintiff's Exhibit 4.

The Court: It may be received.

The Clerk: No. 4.

(The document referred to was received in evidence and marked as Plaintiff's Exhibit No. 4.)

Mr. Freeman: I should like to offer in evidence as [81] Plaintiff's Exhibit No. 5, a Masters No. 8 aluminum fitting which likewise was furnished to me by the defendant Masters in response to a request as to what Masters manufactured and sold.

The Court: It may be received.

The Clerk: No. 5.

(The article referred to was received in evidence and marked as Plaintiff's Exhibit No. 5.)

Mr. Freeman: I should like to offer in evidence as Plaintiff's Exhibit No. 6 a Masters fitting, size No. 4. This, too, was furnished to me by the defendant Masters.

The Court: It may be received.

The Clerk: No. 6.

(The article referred to was received in evidence and marked as Plaintiff's Exhibit No. 6.)

Mr. Freeman: Incidentally, Plaintiff's Exhibit 6, I have left the parts not screwed together, not fastened together.

I am going to offer as Plaintiff's Exhibit No. 7 a Masters No. 4 fitting, together with a small piece of tube therein, assembled, and thereafter partially cut in half or in section for illustrative purposes. The

exhibit, that is the coupling itself or fitting, corresponds or is like Plaintiff's Exhibit 6.

Mr. Huebner: Your Honor, I have no objection to the [82] physical structures and do not question that they were parts supplied by Masters in connection with the deposition. By my silence, however, I wish not to be construed as conceding that they were manufactured, assembled, and sold as assemblies in commercial operations. These are parts that were brought together.

The Court: I understand that. This is just being done for the illumination of the court.

Mr. Huebner: As long as that is clear, then I won't offer any objection to the parts as such.

Mr. Freeman: You do not deny the fact that Masters illustrates and Offers for sale complete assemblies and shows them in his catalog as complete assemblies? I am now referring to Plaintiff's Exhibit No. 2.

Mr. Huebner: I can't answer that until I look at the exhibit.

The Court: It may be received.

The Clerk: No. 7.

(The article referred to was received in evidence and marked as Plaintiff's Exhibit No. 7.)

Mr. Freeman: I am going to offer as Plaintiff's Exhibit No. 8 a Masters fitting, which was furnished to me by Mr. Masters during the taking of his deposition, to which has been added a small piece of flared tubing, and cut in half for illustrative purposes. [83]

The Court: It may be received.

The Clerk: No. 8.

(The article referred to was received in evidence and marked as Plaintiff's Exhibit No. 8.)

Mr. Freeman: I want to offer as Plaintiff's Exhibit No. 9 a Collins fitting which comprises the nut, body, and sleeve, which was furnished to me by Mr. Collins during the taking of his pre-trial deposition. It was then referred to as Plaintiff's Exhibit 15 for identification.

The Court: It may be received.

The Clerk: No. 9.

(The article referred to was received in evidence and marked as Plaintiff's Exhibit No. 9.)

Mr. Freeman: Incidentally, Plaintiff's Exhibit No. 9, I think, is size No. 4.

I should like to offer in evidence as Plaintiff's Exhibit No. 10 a similar Masters fitting, which has been assembled and cut in sections for illustrative purposes.

Mr. Huebner: Did you mean Masters or Collins?

Mr. Freeman: Collins.

The Court: It may be received.

The Clerk: No. 10.

(The article referred to was received in evidence and marked as Plaintiff's Exhibit No. 10.)

Mr. Freeman: As Plaintiff's Exhibit No. 11, I want to [84] offer a Collins fitting furnished to me by Mr. Collins during his pre-trial deposition, identified then as Plaintiff's Exhibit No. 13.

The Court: It may be received.

The Clerk: No. 11.

(The article referred to was received in evidence and marked Plaintiff's Exhibit No. 11.)

Mr. Freeman: What is your Honor's pleasure with regard to pre-trial depositions? Do you want any part of them read? Do you want them briefed?

The Court: Not necessarily. If you want to use them in the trial, you should put them in at the proper time. Are you ready for your pre-trial depositions?

Mr. Freeman: It goes right along with these first exhibits that I produced. They are the pre-trial depositions or adverse depositions of the defendants Collins and Masters.

The Court: Is there going to be any objection to the depositions?

Mr. Huebner: I think there are no objections to the depositions. The only objections might be such as are directed to particular questions asked during the taking, and as will show in the transcript of the depositions. There has been no notice served on us of filing, but I understand——

Mr. Freeman: These have been filed.

Mr. Huebner: I understand there was agreement between [85] my partner, Mr. Bechler, who was present, and Mr. Freeman, that they could be available if either party wanted to file them.

The Court: If there is no objection to the depositions, why not just introduce the depositions in the record and I can read them at leisure.

Mr. Freeman: Then I should like to introduce and offer in evidence as Plaintiff's Exhibit No. 12, the deposition of Irvin W. Masters taken at Los

Angeles, California, on July 11, 1949, as Plaintiff's Exhibit No. 12. It is understood that it has the same effect as though it were read in open court.

Mr. Huebner: I don't think our stipulation to that effect is necessary. It is whatever the court's pleasure is.

The Court: I can read the depositions and you can save the time of reading them in open court.

Mr. Huebner: I think that is much better.

Mr. Freeman: I should like to offer in evidence as Plaintiff's Exhibit 13 the deposition of Joseph C. Collins, one of the defendants here, taken in Los Angeles, California, on July 12, 1949.

The Court: It may be received.

The Clerk: No. 13. [86]

(The depositions referred to were received in evidence and marked as Plaintiff's Exhibits 12 and 13.)

Mr. Freeman: I understand that the originals of these depositions are already in and I am really offering my copies. I am wondering if we might substitute and have the two that were filed in court marked with the exhibit numbers so that I will have a copy.

Mr. Huebner: No objection on our part.

The Court: If we have got them here, we will be glad to do that. I assume they are here. There isn't going to be any argument in this case about the materials that were used in the fittings, is there?

Mr. Huebner: As far as we are concerned, no. We think that whatever material is called for, whether it is in the prior art or whether it is in the

patent in suit or whether it is in these, doesn't make any difference as far as the patentability goes. I don't know what Mr. Freeman will say. [87]

Mr. Freeman: Well, I go along with the statement that as to whether the particular fitting, that is, the body, the sleeve, and the nut are made of dural metal, or aluminum, or iron, is of no consequence, patentwise.

The Court: There is no question in this case about the legal capacity of the defendants, is there? Is Irvin Masters a corporation?

Mr. Huebner: Yes, your Honor.

The Court: No question about that?

Mr. Huebner: Not by either of us.

The Court: There is no question that Collins is doing business under the firm name of Collins Engineering Company?

Mr. Huebner: Not on our side.

Mr. Freeman: There is no question but what both are within the jurisdiction of this court.

Mr. Huebner: Yes, they are both within the jurisdiction.

Mr. Freeman: In connection with the Masters deposition, we then offered in evidence as Plaintiff's Exhibit 10 a letter from Mr. Masters to the purchasing agent of Republic Aviation Corporation, dated April 27, 1949, and Mr. Masters has a copy, or his counsel had a copy of the letter, and I should like to offer it now as Plaintiff's Exhibit No. 14, along with the Masters deposition.

Mr. Huebner: Will you wait just a minute, please?

Mr. Freeman: Yes. [88]

The Court: The clerk suggests that we make that 12-A, if it is part of the Masters deposition.

Mr. Freeman: It is part of it.

The Court: Make it 12-A, instead of 14.

Mr. Huebner: I believe in the deposition, your Honor, that this letter was only marked for identification, and I would object to its introduction now on the ground that it is irrelevant and immaterial.

The Court: Supposing you have it marked for identification.

Mr. Freeman: All right, as Plaintiff's Exhibit 12-A.

The Court: For identification.

(The document referred to was marked Plaintiff's Exhibit No. 12-A for identification.)

Mr. Freeman: I am wondering if Mr. Masters has been able to produce any of the letters, or any of the correspondence that we asked him to produce at the time of the taking of our pre-trial deposition.

Mr. Huebner: Mr. Masters has gotten together whatever he could find. Do you have any specific requests?

Mr. Freeman: They are right in the record, and I was assured that he would check and they would be made available to me.

Mr. Huebner: We will see what we can find in our briefcase, if we may have the court's indulgence. [89]

(Slight delay in proceedings.)

Mr. Huebner: Of the papers asked for, Mr.

Freeman, we will now produce for your inspection all that Mr. Masters could locate. A letter from Parker Appliance to Irvin W. Masters, dated November 13, 1945. There is an earlier letter from Parker Appliance Company to Mr. Masters, dated December 3, 1943. Attached to that is a carbon copy of a letter from Irvin W. Masters, Inc., to the Army Air Forces, dated December 9, 1943. And another letter from Parker Appliance dated July 19, 1946, to Irvin W. Masters, Inc.

Mr. Freeman: Among the letters that you gave me there seems to be missing, at least the letter of August 12, 1943, which has to do with a release of detailed prints, addressed to Irvin W. Masters, 3035 Andrita Street, Los Angeles, California, attention Mr. George E. Blake. And if you recognize that as Mr. Blake's signature I should like to offer a copy of that letter with leave to substitute a photostat.

Mr. Huebner: This appears to be a true photostatic copy of an original.

Mr. Freeman: We offer in evidence as Plaintiff's Exhibit 14 a letter from the Parker Appliance Company to Irvin W. Masters, dated August 12, 1943, entitled "Release of Detailed Prints," and ask leave to substitute a photostat.

Mr. Huebner: No objection to the photostat, your Honor. I would like to request counsel to furnish us photostats of [90] any of these letters he puts in, because we don't have them.

Mr. Freeman: Your request has already been made known and you have your copy.

Mr. Huebner: Thank you. However, as far as the contents of the letter is concerned, this goes not to the substitution of the copy, but to the contents, I am bound to object to it on the ground that it is not shown to be relevant or material.

The Court: Objection is overruled. I can't tell you whether it is relevant or material yet.

Mr. Freeman: We will connect up, I assure your Honor, the letter with the prints involved.

The Court: It will go in subject to a motion to strike.

(The document previously marked Plaintiff's Exhibit No. 14 for identification was received in evidence.)

Mr. Freeman: I should like to offer in evidence as Plaintiff's Exhibit 15 the letter of Parker Appliance Company, dated December 3, 1943, to Irvin W. Masters, which has been furnished to me by the defendant in response to my request, and ask leave to substitute photostats.

Mr. Huebner: No objection to the photostats being substituted.

The Court: It may be received.

(The document referred to was received in evidence and marked Plaintiff's Exhibit No. 15.)

Mr. Freeman: I take it, Mr. Huebner, we can retain these [91] exhibits, take them out and have them photostated, and bring them back here in the morning?

Mr. Huebner: I would like if you would do that, if we have the court's permission.

The Court: It is all right.

Mr. Freeman: I actually have a photostat of the contents of that letter, but it is not on a letterhead. It happens to be a photostat of our carbon copy from our own files. I will make that available now just for immediate use by the court and the defendant, and will later substitute a photostat of the original.

The Court: May I break in and ask a question?

Mr. Freeman: Yes.

The Court: In regard to your Exhibit 14, which is a letter to Irvin W. Masters from The Parker Appliance Company, you say: "In the interest of war effort these drawings are released to you in order that you may manufacture the products illustrated therein. It is understood that the permission herein given is limited to the particular parts shown on the enclosed drawings.

"We consent to the manufacture by you of the items illustrated on the enclosed drawings without royalties subject to the following arrangements:

"1. This arrangement is to remain in effect for the duration of the present war and is to [92] terminate upon cessation of hostilities."

Is there going to be any argument here as to whether or not the war has terminated?

Mr. Huebner: Yes, your Honor.

Mr. Freeman: It says "cessation of hostilities."

Mr. Huebner: There has been no final peace treaty.

The Court: "This arrangement is to remain in effect for the duration of the present war * * *"

My understanding is that the war has never officially terminated.

Mr. Huebner: That is mine, and I intended to argue that at the close.

Mr. Freeman: Even if his position were correct that the war has not ended, the permission then was granted for use in governmental use, and not for civilian use or ordinary commercial sale of these devices.

The Court: That is not what this letter says. We are bound by the agreement that was made, not by a subsequent interpretation.

“We consent to the manufacture by you of the items illustrated * * * subject to the following arrangements:

“This arrangement is to remain in effect for the duration of the present war and is to terminate upon cessation of hostilities.”

I don't think there is any question as to what is meant by the duration of the war, and I think there are a number [93] of decisions to the effect that the present war has never been terminated. There may be some question as to what is meant by “cessation of hostilities.”

Mr. Freeman: Of course there isn't any question and I think we know what we mean by “cessation of hostilities,” and we are in that particular situation at the moment.

The Court: I may know what I mean, but I don't know what the courts mean.

Mr. Freeman: The defendant in this case has not pleaded that they have a license. If they want

to come in here and plead they have a license, that is all right, too. They haven't pleaded that. They want to be in position to jump either way. If they want to plead they have a license, that is another thing. They haven't so pleaded. [94]

The Court: Well, if they plead they have a license, then they are agreeing that you have the authority and the right to give them a license.

Mr. Freeman: And they are taking it under our patent and should be estopped on the question of validity. They ought to get on one way or——

The Court: Isn't it the rule in federal court that you can have as many inconsistent defenses as you can dream of?

Mr. Freeman: Except the question of estoppel arises in connection when you are a licensee. Then let's go one step further, your Honor. If we get into that phase of contract law, then the question of consideration is the determining factor, and if we granted them a license to operate during the actual shooting war, as we did there, then we certainly have the right to revoke that license, and it was revoked on December 1, 1945.

The Court: Well, as far as consideration is concerned, I think that you set forth your consideration, "in the interest of the war effort."

Of course, the war isn't over with yet. We are in a so-called phase of the war. We call it a cold war. but it seems to me that the cold war is harder to get over with than the hot war was. But I am trying to determine the issues, if I can, and this is going to be an issue, I assume, the interpretation

of [95] your agreement with Masters and with Collins.

Mr. Freeman: We never had any with Collins.

The Court: You didn't have any with Collins?

Mr. Freeman: No. There was no letter or permission given to Collins.

The Court: Then could I ask the attorney for Mr. Collins, are you contending that Mr. Collins has any more right or any less right than Masters? These cases were consolidated for trial.

Mr. Huebner: Yes.

The Court: Masters has been given a special permit, a special license, a special agreement. Collins has kind of come in the back door.

Mr. Huebner: Collins came in apparently under the general attitude of acquiescence on the part of the plaintiff.

The Court: What I am trying to find out is, are you now going to contend that Collins is in any better position to resist the plaintiff than Masters?

Mr. Huebner: May I consult with a gentleman here who may know a fact that is pertinent?

The Court: Yes.

(Short interruption.)

Mr. Huebner: As well as I can be informed at the moment, your Honor, I would agree with Mr. Freeman that Collins [96] did not receive a letter of permission. Now, that might place Collins Engineering in a different defensive position than Masters. In other words, Masters may be in a position where he can have those inconsistent defenses

and maybe Collins can not. I don't know at the moment.

The Court: Can we proceed along this line, that I can consider Masters and Collins as one defendant until you point out to me or until you say to me you think Collins is in a better position than Masters?

Mr. Huebner: Or vice versa.

The Court: Or vice versa?

Mr. Huebner: I should think that would be proper.

The Court: In other words, unless you raise the issue, I am going to consider Masters and Collins as one defendant.

Mr. Huebner: Very well, your Honor.

The Court: And as the case progresses, if you think the evidence shows they are not in the same basket, then you can let me know and we will separate them.

Mr. Huebner: All right, your Honor.

The Court: Excuse me for breaking in.

Mr. Freeman: I should like to offer in evidence as Plaintiff's Exhibit 15-A the letter from Masters, Inc., to the Army Air Forces with respect to the prints referred to in the letter of December 3, 1943, in evidence [97] as Plaintiff's Exhibit 15.

The Court: It may be received.

The Clerk: 15-A.

(The document referred to was received in evidence and marked as Plaintiff's Exhibit 15-A.)

Mr. Freeman: I should like to offer in evidence

as Plaintiff's Exhibit 16 the letter of Parker Appliance Company to Irvin W. Masters, dated November 13, 1945, entitled "Revocation of Permission Heretofore Granted Parker Patents," and as part of the photostat which I am offering is a return receipt of the United States Post Office, signed by Irvin W. Masters, by someone in his employ.

The Court: It may be received.

The Clerk: No. 16.

(The document referred to was received in evidence and marked as Plaintiff's Exhibit 16.)

Mr. Freeman: May I ask permission of the court, with the consent of the defendants, to furnish the prints which are referred to in these letters I have just offered so that the letters and the prints will be attached?

Mr. Huebner: You mean the prints of the drawings referred to?

Mr. Freeman: Yes.

Mr. Huebner: Oh, yes. We should like to see them.

Mr. Freeman: Oh, certainly, certainly. I should like [98] to offer in evidence.—

The Court: Before you go any further, I want to ask a question. I might be able to clarify another situation. The defendant in this case is a corporation. The permission was granted to Irvin W. Masters as an individual. The revocation was to Irvin W. Masters as an individual. Are you going to raise any issue as to the fact that the defendant is a corporation and the permission and the revoca-

tion were directed to the individual, rather than the corporation?

Mr. Huebner: That catches me a little bit unprepared, your Honor, because I hadn't seen this letter before. The letter in question is one that Mr. Masters had not located. I hadn't seen it and I haven't reflected on that possibility.

The Court: May I ask Mr. Freeman, is there any question in your mind as to the fact that this permission and the revocation were granted to the individual or directed to the individual, rather than the corporation?

Mr. Freeman: Certainly directed to the individual, and if they take the position they have a license, the license is not assignable without special consent.

The Court: I am trying to find out what the issue is going to be.

Mr. Freeman: That leaves the Masters Corporation as such in exactly the same position as Collins.

Mr. Huebner: It may or may not. Mr. Masters was operating as an individual and in about 1942 turned it into a corporation, but it was a family deal. It was merely a change of the form of doing business. So I don't know at the moment what our legal position will have to be. It may be that he was entitled, that is, he as a corporation was entitled to succeed to whatever benefits may have been conferred upon him as an individual.

The Court: You might contend the corporation never did receive a letter of revocation, because it

was addressed to the individual and not to the corporation.

Mr. Huebner: Yes.

The Court: But, on the other hand, Mr. Freeman may contend that the corporation never did have permission, that it was Mr. Masters himself who had the permission.

Mr. Huebner: That is something we are going to have to think about tonight since we have seen this correspondence, your Honor.

The Court: Well, it might simplify matters and it might not simplify matters if Masters as an individual could be considered the same as Masters, the corporation, just the same as Masters and Collins could be considered as one. But, on the other hand, Mr. Freeman has stated now the corporation does not have a formal permission. Consequently, if they don't have a formal permission, then they are in the same boat as Collins, because Collins is working without formal permission. [100] You might think this matter over and tomorrow, or next week, you might come up with some solution. I don't know. It may affect this case very vitally.

Mr. Huebner: It can, your Honor. I will think about it.

The Court: Excuse me for breaking in, but as the points come up, I like to try to clarify the issues, if I can.

Mr. Freeman: I should like to offer in evidence as——

The Court: By the way, did you offer those prints you were talking about?

Mr. Freeman: I talked about them and I want to gather together all the prints that are referred to in those letters, and with Mr. Huebner's consent and with the court's consent, we are going to fasten them on so that they can go in as complete exhibits.

Mr. Huebner: I assumed in due time you would add those.

Mr. Freeman: At this time, I should like to offer in evidence as Plaintiff's Exhibit 17 the drawings or prints furnished to me by Collins on July 12, 1949, during the taking of his depositions in response to my request that he furnish to the plaintiff the active prints which he now uses or used at that particular time, shortly prior to 1949, for the making of bodies, nuts, and sleeves. These drawings were [101] given to me at the time of the taking of the depositions, and the court reporter then initialed each of the drawings.

Mr. Huebner: I just want to see what they are, if I may.

Mr. Freeman: Surely.

The Court: While you are examining those documents, may I suggest that if you have got any other documents, that you ask him to examine them during the recess?

Mr. Freeman: These were furnished to us by the other side and I thought they would have their own copies.

Mr. Huebner: We probably have, your Honor, but we didn't know for sure what he was going to use, and there is a bunch of them here that have to be identified so we can assemble them properly.

The Court: While you are assembling those, we will take our afternoon recess. We will now recess until 15 minutes after 3:00.

(Recess.) [102]

Mr. Freeman: Could I get the reporter to read back just a little?

The Reporter: Exhibit 17 is in process.

Mr. Freeman: I offer as Plaintiff's Exhibit 17 a booklet of prints furnished to the plaintiff by the defendant Collins, entitled "Collins Active Prints." These prints were furnished us during the pre-trial deposition of Collins on July 12, 1949. They are offered as Plaintiff's Exhibit No. 17.

The Court: Admitted in evidence.

(The document referred to was received in evidence and marked Plaintiff's Exhibit No. 17.)

Mr. Freeman: I should like to offer as Plaintiff's Exhibit 18 a group of blueprints furnished to the plaintiff by Irvin Masters as the active prints of the defendant Masters.

The Clerk: No. 18.

The Court: It may be received.

(The document referred to was received in evidence and marked Plaintiff's Exhibit No. 18.)

Mr. Freeman: At this time we would like to call Mr. Wagner of Parker Appliances as a plaintiff's witness. [103]

CHARLES H. WAGNER

called as a witness by and on behalf of the plaintiff, having been first duly sworn, was examined and testified as follows:

The Clerk: Your name, sir?

The Witness: Charles H. Wagner, Jr.

Direct Examination

By Mr. Van Sciver:

Q. Mr. Wagner, would you state your residence?

A. 1295 Hereford Road, Cleveland Heights, Ohio.

Q. You are a vice president of the Parker Appliance Company, the plaintiff in this suit, and owner of the patent in suit? A. Yes.

Q. How long have you been employed by Parker Appliance Company?

A. Since January of 1941.

Q. Will you state the background and present business of the Parker Appliance Company?

A. The Parker Appliance Company was started by Arthur L. Parker in 1924. He began the manufacturing of fittings, and that has remained the major portion of our business down through the end of the war years until about two years or so ago. The Parker Appliance Company also makes a line of precision valves. These valves are used in both industry and in [104] the aircraft field. The company also makes a line of synthetic rubber products. We have presently two manufacturing plants, one in Cleveland and one in Los [105] Angeles.

(Testimony of Charles H. Wagner.)

Q. Is one of the large or major parts of the Parker Appliance business today the manufacture of fittings?

A. I would say that it accounts for approximately one-third of the business.

Q. Does Parker Appliance Company sell its fittings to aircraft companies in the Los Angeles area?

A. Yes.

Q. Does the Parker Appliance Company do research and development with respect to aircraft fittings?

A. Yes.

Q. Has it done so for some time?

A. I think that the Parker Appliance Company, within my knowledge, and certainly much before that, at least ever since I have been there, has carried on extensive development work both in fittings and valves.

Q. Does the Parker Appliance Company have an engineering department which works on fittings?

A. Yes, we have quite a large engineering department.

Q. Has that been true for some time?

A. Yes.

Mr. Van Sciver: You may cross-examine.

Cross-Examination.

By Mr. Huebner:

Q. Who is in charge of the Parker Appliance Company engineering? [106]

(Testimony of Charles H. Wagner.)

A. Mr. Robert H. Davies.

Q. Is he present here? A. No.

Q. Do you expect him at this trial?

A. No.

Q. Who is in charge of research at Parker Appliance Company?

A. Mr. Davies, Mr. Robert H. Davies.

Q. The same Mr. Davies?

A. The same Mr. Davies.

Q. Who will not be present here? A. No.

Mr. Huebner: No further questions.

The Court: May I ask a question?

Mr. Van Sciver: Certainly.

The Court: You say you have a plant here in Los Angeles?

The Witness: Yes, your Honor, we have.

The Court: Do you make fittings here in Los Angeles?

The Witness: Yes, sir.

The Court: That's all.

Mr. Van Sciver: Thank you. That's all.

(Witness excused.)

Mr. Freeman: Mr. Wolfram. [107]

JOHN N. WOLFRAM

called as a witness by and on behalf of the plaintiff, having been first duly sworn, was examined and testified as follows:

The Clerk: Your name, please?

The Witness: John N. Wolfram.

(Testimony of John N. Wolfram.)

Direct Examination

By Mr. Freeman:

Q. Will you please state your full name?

A. John N. Wolfram.

Q. Where do you reside?

A. At 1608 Maywood Road, South Euclid, Ohio.

Q. By whom are you employed?

A. The Parker Appliance Company.

Q. How long have you been employed by that company?

A. Nearly 18 years.

Q. Will you just briefly testify what your duties were at the outset when you went into the employ of the Parker Appliance Company?

A. When I first joined the Parker Appliance Company in 1932, I started as a draftsman, working mostly on the detailings of fittings for production in the shop.

Q. Has that work, that is, your work with fittings, continued on up to the present time?

A. Yes, it has, with the possible exception of the [108] last three or four years.

Q. Will you tell us just what you have done or what your work consisted of in connection with fittings?

A. As I said, when I first started there, I did routine engineering or drafting on fittings, making drawings for shop purposes. I did that only for a short time as a regular full-time thing, for perhaps several months.

I then was given work to do on technical catalogs.

(Testimony of John N. Wolfram.)

In connection with this, I would gather technical information on fittings and some of the other company products, and write descriptions and prepare charts of dimensional data and other technical information, and prepare the illustrations and prepare the catalog sheets for distribution.

Q. And the technical drawings and technical data that you say you worked on had to do with fittings, correct? A. Largely fittings.

Q. Have you, in connection with your work on different types of fittings, had anything to do with fittings for rubber hose, metal tube, or lead pipe?

A. Yes, I have.

Q. Just what are the general problems that you have dealt with in connection with fittings?

A. Well, as I said, I had been working on the catalog illustrations and the gathering of technical data for catalog sheets, and that continued until about 1939 or so, probably [109] 1940. About that time I got into development work and for a time I acted directly with Mr. Parker and the chief engineer or the chief draftsman for the company, and made records and gathered data in connection with the fitting development programs that were then under way. Some of this data I forwarded to our patent attorneys and followed through to see that patent applications would be filed.

Then in about 1943, the company had expanded in size considerably because of wartime production, and a new building was built for the purpose of carrying on further development work.

(Testimony of John N. Wolfram.)

At that time I was put in charge of a group to do development work on fittings. It was our duty to analyze fitting problems as they were brought to our attention by—well, in that period largely by the Army and the Navy, and to try to solve their problems. These fitting problems involved not only fittings for hard metal tubes, such as steel and aluminum, but they also involved problems with rubber hose fittings.

This development program, I might add, continued until the end of the war, and during that period we had perhaps five or six engineers working on the research problems under my direction for that full period of time. Then after the war ended it tapered and the program as it was then constituted ended about the middle of 1946, at which time I got out of active [110] development work on fittings, and the function was consolidated with the regular engineering department.

Q. Does Parker Manufacturing Company manufacture what we call a two-piece fitting, or did it manufacture a two-piece fitting?

A. It did, yes.

Q. Did it manufacture a fitting sometimes referred to as an NAF two-piece fitting?

A. Not to my knowledge did they manufacture the fitting that was officially known as an NAF fitting, but we were well acquainted with it. It is possible that they may have manufactured a few of the components in the Los Angeles plant, but as to the actual manufacturing of that fitting, I am not certain.

(Testimony of John N. Wolfram.)

Q. Do you have a fitting here illustrative of a two-piece fitting? A. Yes, I do.

Q. Will you briefly explain and show to the court the make-up of a two-piece fitting?

Mr. Freeman: This, your Honor, is part of the background leading up to the Parker patent in suit, and I think it is material and we will shorten it as much as we possibly can.

The Witness: I have in my hand three pieces, but one of the pieces is a short section of tube, which is to be [111] coupled by the fitting itself. The fitting comprises the two pieces which we commonly refer to as the body member and the nut member.

The body member has a threaded section and a beveled portion against which a flared tube may be clamped. The body also has a wrench-engaging portion and a thread at the other end to which the fitting, or by means of which the fitting may be mounted in an engine or a cylinder or other device.

The nut is a single piece and has a thread for engagement with the thread on the body. The nut on its inside also has a tapered surface, which is adapted to engage the outer face of the flare on the tube. The nut has a bore through it so that it can be inserted over the tube with the inside shoulder, which I have mentioned, brought into engagement with the flare on the tube. Then the nut is threaded onto the body, and in so doing the inside surface of the flare is tightly clamped against

(Testimony of John N. Wolfram.)

the beveled portion of the body to establish a liquid-proof seal.

Q. (By Mr. Freeman): Is that fitting that you have just described illustrative of the two-piece NAF fitting?

A. Yes, it is illustrative of the two-piece, but it is not the actual NAF fitting, as the NAF fitting is commonly understood to be.

Q. As of today, that is an AN fitting, is that correct? [112]

A. That is correct.

Q. Is it also illustrative of what we generally refer to as a two-piece fitting, as distinguished from a three-piece fitting?

A. That is correct.

Mr. Freeman: I am going to offer in evidence as Plaintiff's Exhibit 19 a fitting illustrative of the NAF fitting, sometimes referred to as a two-piece fitting.

The Court: It may be received.

The Clerk: No. 19.

(The article referred to was received in evidence and marked as Plaintiff's Exhibit No. 19.)

Mr. Freeman: Likewise, I am going to offer as Plaintiff's Exhibit 20 a similar illustrative fitting with a section cut out so that the inside may be more readily seen.

The Court: It may be received.

The Clerk: No. 20.

(The article referred to was received in evidence and marked as Plaintiff's Exhibit No. 20.)

(Testimony of John N. Wolfram.)

Mr. Freeman: You might point out to the court the three parts, that is, the tube, the body, and the other member, as shown in section.

The Witness: This is a completely assembled fitting with the tube in place and with the flare on the tube. The point at which I have my pencil now is clamped between the [113] external beveled surface of the body and the internal beveled surface of the nut. The clamping is brought about by the threaded engagement at this point between the nut and the body member.

Q. I am going to hand you a fitting and will ask you to state just what it is.

A. The fitting I now have in my hand is a two-piece fitting of a somewhat different type than the NAF which we have been discussing. This fitting differs from the NAF type in that the body has a female thread and the nut has an external thread. The body itself has a recessed portion below the thread with a conical or beveled surface on it against which the inner face of the flare is clamped by the nut.

Q. I am going to hand you another fitting similar to the one you have in your hand, which we will offer as Plaintiff's Exhibit 21, and will ask you——

The Clerk: Are you offering that?

Mr. Freeman: I am offering it.

The Court: Exhibit 21 may be received.

The Clerk: No. 21.

(The article referred to was received in evi-

(Testimony of John N. Wolfram.)

dence and marked as Plaintiff's Exhibit No. 21.)

Q. (By Mr. Freeman): —which includes a cut-away section and corresponds to Plaintiff's Exhibit 21—— [114]

The Clerk: That is 22.

The Court: It may be received.

The Clerk: No. 22.

(The article referred to was received in evidence and marked Plaintiff's Exhibit No. 22.)

Q. (By Mr. Freeman): I am going to hand you a fitting, which includes a small piece of tubing therein in its entirety, and another one with a section cut out, and will ask you to explain both of these and what they show.

A. These are two samples of the same fitting, one being cut away and the other not being cut away. The fitting is what has been known as the Parker triple type fitting. It is a three-piece fitting. This fitting has also been known as the Air Corps 811 fitting, it having been the standard or adopted as the standard by the Army Air Corps for use in aircraft.

Q. Adopted prior to 1940, correct?

A. That is correct. I believe that this fitting was officially approved as the standard by the Air Corps some time in 1935.

Mr. Freeman: I should like to offer the fitting, that is Parker's No. 811, size 6, which is in its entirety, or not cut away, as Plaintiff's Exhibit 23.

The Court: It may be received.

(Testimony of John N. Wolfram.)

The Clerk: No. 23. [115]

(The article referred to was received in evidence and marked Plaintiff's Exhibit No. 23.)

Mr. Freeman: And a similar fitting with a section cut out for illustrative purposes as Plaintiff's Exhibit No. 24.

The Court: It may be received.

The Clerk: No. 24.

(The article referred to was received in evidence and marked Plaintiff's Exhibit No. 24.)

Q. (By Mr. Freeman): Now, will you turn to the Parker patent in suit, patent No. 2,212,183, Plaintiff's Exhibit No. 1, and briefly describe the various parts, its make-up, and what the patentee said with respect to the various parts of the fitting?

A. In the drawing of the patent, Fig. 1, is an illustration of a complete cross-section view of the fitting with a section of tube clamped in place.

Fig. 2 is a partial section view showing the parts in their loose assembly, or what we might say finger tight position; that is, this is the position that the parts are in when they are just brought up snug and no appreciable pressure has been applied to the nut by a wrench.

Fig. 3 is a cross-section view similar to Fig. 2, which shows the parts in their relationship after wrench pressure has been applied to make the joint tight. [116]

Q. Just what do you mean by finger tight?

A. I mean that is the position of the parts as

(Testimony of John N. Wolfram.)

assumed when the parts are threaded together with the fingers and just brought up snug so that there is no play, all the play is taken up, that is the nut is threaded onto the body and threaded on far enough so that the nut will engage the sleeve at the shoulders of the respective parts, so that the sleeve will be forced against the outside surface of the flare on the tube and the flare brought against the beveled surface on the body. But it is the position to which they are just brought without any pressure being applied which would distort or put any of the parts under stress.

Q. Does Fig. 3 illustrate the position of the parts when you have moved the nut beyond what we might call the finger tight position by using a wrench for fastening the parts together?

A. That is correct. And the position of Fig. 2, that is, the finger tight position, we could not very well expect the fitting to stay closed or to seal the tubing against leakage. It is necessary to stress the parts somewhat by applying additional pressure or by applying pressure with a wrench. When this is done the parts are stressed and the sleeve, in particular, is caused to expand somewhat. This is necessary so that a liquid tight seal will be made.

Q. Now, turning to the specification, and particularly [117] the first paragraph of the patent, what does the patentee there state with respect to the subject matter of his present invention or the patent?

A. It is stated in this first paragraph that the

(Testimony of John N. Wolfram.)

present invention relates to improvements in tube couplings, and particularly to improvements in couplings such as typified in the prior Parker patents 1,893,442 and 1,977,240.

Q. Can you point out among the exhibits that have already been offered a fitting typifying or exemplifying Parker Patent 1,893,442?

A. Yes, I can.

Q. Will you come down and pick out the one you want?

The Court: May I ask a question?

Mr. Freeman: Yes.

The Court: Is there any contention here that you have a patent upon the flared end of the tube?

Mr. Freeman: No, no. The patent is directed to the fitting.

The Court: There is no question about the flare?

Mr. Freeman: No.

The Court: Do you contend that you have a patent upon the way the body is beveled so as to fit into the flared end of the tube?

Mr. Freeman: That is one part of the patent, that is one component or one portion of the claim. In other words, [118] the patent is defined, the structure covered by the patent is defined in each one of these three claims. Just as Mr. Huebner said earlier in his opening statement, each claim has to be measured by itself.

The Court: Didn't I understand—wasn't there a stipulation, in fact, about two former patents of

(Testimony of John N. Wolfram.)

Parker? You are not claiming anything under the former patents?

Mr. Freeman: No.

The Court: But didn't they use the same bevel here upon the body?

Mr. Freeman: They used a cone-shaped surface, that is correct, and I am just getting into that second patent, because I want to show your Honor wherein this patent differed from it, and that is why I purposely included a fitting made in accordance with the earlier patent, and we will show wherein the fittings that we now charge to infringe differ from the earlier patent 1,893,442, and differ from the earlier fittings manufactured by the Parker Appliance Company.

The Court: Well, in the former patent they used this beveled cone?

Mr. Freeman: That is correct, that one portion, that is correct. They also had a body member in the former patent.

The Court: Is this beveled cone in the public domain?

Mr. Freeman: Yes, I would say—I mean as long as you do not use it in the combination with the sleeve, having the [119] sleeve angle and all the rest of it, yes. It is very much as I have said, every word of Lincoln's Gettysburg speech is within the public domain, yet it took Lincoln to put those words together to make a great speech.

The Court: So if I understand correctly, the beveled flare, and the bevel upon the body, that is

(Testimony of John N. Wolfram.)

where the tube and the coupling come together, is in the public domain?

Mr. Freeman: I would say yes to that.

The Court: Excuse me for breaking in.

Mr. Huebner: Your Honor, before that question is answered, may I suggest that a proper foundation should be laid by the introduction of these patents? [120]

The Court: Are you talking about the answer from the attorney or the answer from the witness?

Mr. Huebner: I think there is a question the witness hasn't answered, and he has been asked to pick out a fitting which corresponds to a patent which is not yet in evidence. I am only suggesting that there should be continuity.

The Court: My understanding was that he was to pick out a fitting that was in evidence.

Mr. Freeman: That was in evidence, and he picked one out that was in evidence.

Mr. Huebner: There is no patent in evidence that you are talking about. You are telling him to pick one out that corresponds to patent 1,893,442, and there is no such patent in evidence. So why doesn't he, to lay a foundation, put the patent in evidence. Otherwise, it is objectionable on the ground there is no foundation laid.

Mr. Freeman: I think we can only do one thing at a time, and I asked him to pick up a physical device which is already in evidence, and pick it out as to the particular patent that is referred to in the patent in suit. I will at this time, in order to

(Testimony of John N. Wolfram.)

save any controversy, offer in evidence as Plaintiff's Exhibit No. 25, a copy of Parker patent No. 1,893,442, dated January 3, 1933. I am going to hand your Honor an extra copy which has been marked "Court's Copy," which may be used as a work copy. [121]

The Court: That will be received in evidence.

(The document referred to was marked Plaintiff's Exhibit No. 25, and was received in evidence.)

Q. (By Mr. Freeman): Now, for the purpose of the record will you tell me which exhibits you picked up when I asked you to pick up a physical device corresponding to Parker patent 1,893,442?

A. I picked up Plaintiff's Exhibit No. 23 and 24.

Mr. Freeman: At this time I should like to offer in evidence as Plaintiff's Exhibit No. 26 a copy of patent No. 1,977,240, which is likewise referred to in the first paragraph of Plaintiff's Exhibit 1, the patent in suit, No. 2,212,183.

The Court: It will be received.

(The document referred to was marked Plaintiff's Exhibit No. 26, and was received in evidence.)

Q. (By Mr. Freeman): It is correct, is it not, that the Parker Appliance Company manufactured and commercially sold fittings corresponding to the physical specimen here, Plaintiff's Exhibit 23?

A. That is correct.

Q. Now, will you proceed with the further de-

(Testimony of John N. Wolfram.)

scription or what the patentee says constitutes his invention over and above, or the improvement that he made over Plaintiff's Exhibits 25 and 26, which are the Parker patents 1,893,442 and [122] 1,977,240, respectively?

A. In paragraph 2 of the patent 2,212,183 it is stated that it is an object of the invention to provide a tube coupling wherein the coupling members are so constructed and dimensioned that the flared end of the tube is firmly contacted with throughout the greater portion of the flared end so as to provide a tight and efficient seal.

This paragraph indicates that the flare is clamped between the seats throughout the greater portion of the flare itself.

In paragraph 3 of the patent, beginning at line 14, it is stated that it is a further object of the invention to provide a tube coupling of the above type wherein the outer clamping member engaging the flared end of the tube is so dimensioned and shaped that contact is first made at the free end of the clamping member whereby the clamping member is caused to expand, thus bringing the entire clamping surface into intimate contact with the outer surface of the flared end of the tube with a resulting tight and efficient seal.

Q. Now, will you point out just what is meant by the free end of the clamping member?

A. The clamping member which is referred to in this paragraph or object is the sleeve portion which is designated as 17 in the drawing. And the

(Testimony of John N. Wolfram.)

free end of the sleeve is the [123] lower end of the sleeve as viewed in Figure 1 or in Figure 2, the free end of the sleeve is designated by the numeral 19, and this paragraph indicates that this particular end of the sleeve first engages the outer surface of the flare.

Q. Is that illustrated in Figure 2 of the patent drawings?

A. That is illustrated in Figure 2. It will be noted that the portion of the sleeve adjacent the point indicated by the lead line from the numeral 19 is in contact with the flare of the tube, but that the point 18 of the sleeve, which is back a distance from the point 19, is out of contact with the outer face of the flare.

Q. In other words, there is a small amount or an open space between the lead lines for the reference numerals 18 and 11 in Figure 2, is that correct?

A. That is correct.

Q. So that the lower end or the nose end 19 of the sleeve first engages the outer end of the flare, is that correct? A. That is correct.

Mr. Freeman: It is 4:00 o'clock, your Honor, and I am just about ready to get on to another subject.

The Court: If you can stop here, we will conclude for the afternoon.

Mr. Freeman: We can very conveniently. [124]

The Court: All right. We will declare a recess now until 10:00 o'clock in the morning.

(Whereupon, at 4:00 o'clock p.m. Wednes-

(Testimony of John N. Wolfram.)

day, June 14, 1950, an adjournment was taken until 10:00 o'clock a.m., Thursday, June 15, 1950.) [125]

June 15, 1950—10:00 A.M.

The Court: You may proceed.

Mr. Freeman: Mr. Wolfram, will you please take the stand.

JOHN H. WOLFRAM

the witness on the stand at the time of adjournment, being heretofore duly sworn, resumed the stand and testified further as follows:

Mr. Freeman: I return to you, Mr. Huebner, the original of Exhibits 15 and 15-A, furnishing you with a photostat of each and filing with the clerk a photostat of each that shall be the exhibits in this case.

Direct Examination

By Mr. Freeman:

Q. Yesterday at the close you referred to Fig. 2 of the Parker patent, Plaintiff's Exhibit 1, and mentioned the open space between the inner side of the angle or inclined surface of the sleeve and the outside or inclined side of the flare itself; that is correct, is it not? A. That is correct.

Q. Now, will you tell us briefly just what happens, that is, initially, where the sleeve engages the flare, and then what takes place as the sleeve

(Testimony of John N. Wolfram.)

through the cooperation of the nut is [127] tightened?

A. Fig. 2, as we mentioned, shows the parts in what we have called the finger tight or loose assembly position. On page 1, column 2, of the description, beginning with line 31, it is stated: "It will be observed by reference to the dotted line extension *c* in Fig. 2 of the drawing that the flared surface 18 is formed so as to normally bear more acute angular relation to the coupling axis than does the flared tube end outer surface 11 which it is adapted to engage in clamping relation."

This greater angular relationship that this specification describes results in that space between the inside surface of the tapered part of the sleeve and the outer surface of the flare at the heel of the flare or that part of the flare that is farthest from the extreme end of the flare. This angular relationship is a differential angle, the differential angle being the angle bounded by the lines *b* and *c* in Fig. 2.

Q. That is, those lines are continuations of the angle formed by the inner surface of the sleeve and the outer surface of the flare, is that correct?

A. That is correct. And because of this differential angle or the difference in the angles between the sleeve and the tube flare, the sleeve itself is caused to initially come in contact with the flare at a point near the lower end of the sleeve as viewed in Fig. 2 or adjacent the point indicated by [128] the numeral 19. We have also referred to this, I believe, as toe contact, "toe" meaning the extreme

(Testimony of John N. Wolfram.)

bottom end of the sleeve as viewed in Fig. 2. [129]

Q. Now, will you proceed further with your explanation of the Parker patent?

The Court: May I interrupt and ask a question?

Mr. Freeman: Yes.

The Court: On your Fig. 2, between the toe and the upper part of the line, which I would say would be the heel, there appears to be a white space which indicates there is a slight opening.

Mr. Freeman: That is correct. Were you directing your attention to me or the witness?

The Court: No, I am addressing him.

Mr. Freeman: I am sorry.

The Court: What is the advantage of that open space? What does it do?

The Witness: That is one of the distinguishing features of this patent. I think that we are prepared to bring out a number of advantages for that feature, your Honor.

The Court: Am I anticipating? There is a reason for that vacancy there, is there, that opening?

The Witness: Yes, your Honor, there is.

The Court: Well, maybe I am getting ahead of the story.

Q. (By Mr. Freeman): I suggest, as long as the court asks that, although it does follow along in our presentation, that you point out quickly what you mean by toe contact, which [130] is brought about by that open space which the court referred to, and then the advantages of that open space and what happened? Just go ahead briefly

(Testimony of John N. Wolfram.)

and when we come to it again we will endeavor to shorten it up.

The Court: It seems to me there is not only toe contact, but there is heel contact, that is, contact at the upper end, leaving a little vacant space in there between the bottom and the top.

The Witness: I don't believe, your Honor, that there is contact at the upper end in the initial position illustrated in Fig. 2, since the flare is formed on a straight line, so to speak, along that line, small letter b, and the inside surface of the sleeve is formed on a straight line, corresponding to line c. They do contact at the toe end and then diverge from there on, so that there is no contact at the heel end.

Q. (By Mr. Freeman): I think the court is referring to the contact with respect to the vertical wall of the sleeve and the vertical wall of the tube as distinguished from the inclined wall of the sleeve and the inclined wall of the flare. Would you explain that?

A. That contact—it appears to be contact in the drawing and it may or may not be. The sleeve is formed with an inside diameter so as to be a slip fit over the tube itself and, of course, it would be desirable to have a condition [131] where the sleeve would be just in contact with the tube along that vertical wall, but with ordinary manufacturing practices, you usually end up with perhaps two or three thousandths of an inch clearance, which is so small a clearance that it cannot be very well shown on a drawing of this kind.

(Testimony of John N. Wolfram.)

Q. Will you now proceed to explain to the court the advantage or the feature of the Parker patent with respect to what you have referred to as a differential angle?

A. We have just been talking about the differential angle and the resulting toe contact at the point 19. It is the latter that we are more interested in. The toe contact or the initial contact at the toe results in several advantages that are brought about when the coupling is tightened. One of the advantages is that it permits the sleeve head to expand during the clamping action and as it expands, it swings out or pivots somewhat, and thus as it pivots, the surface 18 of the sleeve turns with the sleeve head, so to speak, and eventually comes into contact with the flare.

Q. That is the full area contact at that time?

A. That is correct.

Q. And is that as illustrated in Fig. 3 of the drawing?

A. That is correct.

Q. Now, proceed.

A. Another advantage of the initial toe contact is [132] that it affords an approach to a line type seal, that is, most of the clamping pressure applied by the nut to the sleeve is transmitted to the flare at a line about the circumference, or if we consider one cutting plane through the fitting, it is concentrated at a single point in that cutting plane. Since it is applied to only a point, the unit pressure which will be applied will be very great. If the sleeve is initially in contact with the entire surface

(Testimony of John N. Wolfram.)

of the flare, as illustrated in Fig. 3, if pressure is then applied to the sleeve, all of the pressure is distributed equally along the entire area of the flare, and the unit pressure will not be as great, and it is really unit pressure that we are trying to obtain in order to obtain a tight and efficient seal. [133]

Q. Will you proceed now with the further explanation of the patent?

A. We were discussing the second object of the specification, beginning with line 14, where we closed yesterday. I believe I pointed out at that time that this paragraph indicates that it is an object of the invention to so shape and dimension the parts so that we will obtain this initial contact at the free or lower end of the sleeve, and obtain the toe contact, as we call it. This permits the sleeve head to expand, and as it expands, it swings or pivots and brings about area contact between the sleeve and the flare.

The third object which is stated in the patent is indicated beginning with line 24 of column 1 of the specification and it states that it is an object:

“to provide a coupling of the above type wherein the clamping member engaging the outer surface of the flared end of the tube consists of an inner and an outer sleeve, and wherein the clamping end of the inner sleeve which contacts with the flared end of the tube is so shaped as to be free from radial contact

(Testimony of John N. Wolfram.)

with the outer sleeve when the coupling members are in firm gripping contact with said flared end of the tube."

The specification here refers to inner and outer sleeves, [134] and it says that the clamping member is formed of the inner and outer sleeve.

Q. Will you tell us just what two parts those are, and perhaps point them out on some of the physical exhibits here?

A. The outer sleeve referred to in the specification is actually the nut 12 as shown in Fig. 1, and the inner sleeve is the part which we have been merely calling "sleeve," and which is indicated at 17 in Fig. 1.

Mr. Freeman: Does your Honor have that physical device that illustrates it?

The Court: Yes.

Q. (By Mr. Freeman): Will you proceed further, please?

A. According to this object, it is stated that the clamping end of the inner sleeve, meaning the lower or toe end 19, is so shaped as to be free from radial contact with the outer sleeve, which is the nut 12. Thus, in Fig. 2, it is clearly shown that there is a space between the outer diameter of the lower end of the sleeve adjacent the point 19 and the opposing wall of the nut.

The object further states that the parts are so shaped that these parts, that is, the outer wall of the sleeve and the inner wall of the nut at the lower

(Testimony of John N. Wolfram.)

end of the sleeve, are out of contact when the coupling members are in firm gripping [135] contact with the flared end of the tube. Which means after the parts have been made up wrench tight. And you will note that in Fig. 3 the space at the lower end of the sleeve is still present, but it is illustrated as being somewhat smaller than in Fig. 2. This indicates that the sleeve head has expanded but it has not expanded enough to go out into radial contact with the inner wall of the nut.

Q. When you have that expansion that you have just referred to and take up the space or a portion of the space between the outer wall of the sleeve and the inner wall of the nut, you then have absorbed or lose the space that has been referred to as the differential angle shown in Fig. 2 between the reference numbers 11 and 18, is that correct?

A. That is correct.

Q. And you then have full area contact between the inner wall or the inclined wall of the sleeve and the outer wall of the flare, is that correct?

A. That is correct.

Q. Now, proceed further with your explanation.

A. Near the bottom of column 1 of the specification, beginning with line 51, it is stated that:

“The tube to be clamped is indicated at 8, and this tube is flared at its end, by a suitable flaring tool, as indicated at 9.”

9 being the flared end of the tube. [136]

“Any suitable flaring tool may be used to

(Testimony of John N. Wolfram.)

give to the inner surface 10 of the flared end of the tube an angular positioning, substantially the same as the angle of the seat 7 against which it is to be clamped.”

The seat 7 being the beveled surface on the body member 5.

Q. I am wondering at this time if you would refer to a physical specimen of the tube that I hand you, which we will mark for identification Plaintiff's Exhibit 27. I will ask you to just point out, using both ends, as to what you mean by a tube with a flare. Tell us how it is formed.

A. Your Honor, this is just a short section of tubing and, of course, the tubing length is cut to fit the particular installation. Initially the tube has plain ends as at the end—— [138]

Q. With the smallest diameter?

A. With the smallest diameter. When the tube is cut to the proper length, the nut and the sleeve are slipped over the tube, and then the tube is flared out by some suitable flaring device, the flare being an enlargement of one end of the tube. The flare is formed so that its angle, or the angle of the inner surface of the flare, coincides with the angle on the seat of the body against which it is to be clamped.

Mr. Freeman: I should like to offer in evidence the flared tube as Plaintiff's Exhibit 27.

The Court: It may be received.

The Clerk: No. 27.

(Testimony of John N. Wolfram.)

(The article referred to was received in evidence and marked Plaintiff's Exhibit No. 27.)

Q. (By Mr. Freeman): I am wondering if you would take any of the physical specimens and point out, so that the record is complete, on the body portion the screw threads, the wrench engaging part, so that we will have that in our record here.

A. I have here Plaintiff's Exhibit 5, which is a coupling made in accordance with the patent 2,212,183, and the body member of this coupling has a beveled surface at one end, against which the flare of the tube is to be clamped. This beveled surface coincides with the surface shown at 7 in [138] the patent drawing.

Q. What is the reference numeral used in the patent to refer to the member that we call here the body member?

A. The body member in the patent drawing is referred to by the numeral 5.

Adjacent the beveled end of this body member, there is a screw thread, which is indicated at 14 in the patent.

Q. We refer to that as exteriorally screw threaded.

A. The threads on the body is referred to as an external thread, correct.

Q. And that thread is close to the beveled or inclined portion, correct?

A. That is correct. This is the thread that is engaged by the threads on the nut.

(Testimony of John N. Wolfram.)

Q. I note in the patent, Fig. 1, that the body member just below the threads that you have just referred to by the reference numeral 14, includes an enlarged portion, which has no number on the patent drawing. Will you point that out in the physical device that you have and tell us what function it serves?

A. The enlarged portion shown about in the middle of the body member in the patent drawing illustrates the wrench engaging portion, which is in the form of a hexagon about the body member.

Q. Now, will you proceed with an explanation of the [139] member that has been referred to in the physical device as a nut?

A. The nut is the part which is indicated by the numeral 12 in the patent drawing. It has a thread, which is an internal thread, and which is indicated, also, by the numeral 14 in the patent drawing. This thread engages the thread 14 on the body member.

At one end of the nut there is a flange portion, 15, the inner face of which forms a shoulder, which is opposite a shoulder on the sleeve.

Q. Is that an inwardly extending or an inturned flange?

A. That is correct. I do not see a reference numeral for the shoulder itself, but in Fig. 3 the shoulder is the transverse surface, which lies very close to the end of the lead line for the reference numeral 15.

The nut also has a wrench engaging portion on

(Testimony of John N. Wolfram.)

its outer surface. There is no reference numeral in the drawing to indicate this wrench engaging portion.

Q. But that wrench engaging portion is 6-sided, or at least with a straight side so that a wrench may easily engage it, correct?

A. That is correct.

Q. Now, will you refer to the member of the physical device that has been called a sleeve and describe it? [140]

A. The sleeve is the portion which bears the reference numeral 17 in the patent drawing. It has a bore or a hole throughout its length, through which a tube is adapted to be entered.

At one end of the sleeve, there is an enlargement or head portion, which is indicated by the numeral 17 in the patent drawing. I believe that the sleeve generally is indicated in the patent drawing by the numeral 16, rather than 17. The head of this sleeve has a transverse surface, which is indicated at 20 in the patent drawing, and which lies opposite the clamping shoulder 15 of the nut when the parts are in position and is engaged by that clamping shoulder.

The outer wall of the sleeve head is indicated by the numeral 21 in the patent drawing, and is at an incline, as indicated by the extension line, d.

Q. What do you mean by incline?

A. This surface is slightly inclined with respect to the longitudinal axis of the sleeve.

(Testimony of John N. Wolfram.)

Q. You are now talking about the outer wall of the head of the sleeve, correct?

A. That is correct.

Q. And do I understand that the line d, or the extension of the wall of the sleeve, projects at an angle to the vertical plane?

A. That is correct. It is at an angle to the longitudinal axis of the coupling, or the [141] sleeve.

Q. And it also projects at an angle to the inner wall of the nut?

A. That is correct, the inner wall of the nut is made parallel with the axis of the coupling, so that it does bear an angle with the wall of the sleeve head.

Q. Recognizing, as you have, that the fittings may be in various planes at various times in their actual installation, but taking the position of the patent drawings, and assuming that the drawing is held in a straight up and down or vertical position, then it is correct to say that the inner wall of the sleeve is in a vertical plane, is that correct?

A. That is correct.

Q. And it is likewise correct to say that the outer wall of the sleeve is at an angle to the vertical plane?

A. That is correct.

Q. And when I say "sleeve," I am talking about the sleeve head or the enlarged portion of the sleeve.

A. Yes, that is correct.

Q. And the outer wall of the sleeve, which is

(Testimony of John N. Wolfram.)

narrower or smaller, and encompasses the tube itself, it is in a vertical plane, is that correct?

A. Could you read the question? I am not sure I follow you.

(Question read by reporter.) [142]

The Witness: That is correct.

Q. (By Mr. Freeman): Between the narrow portion of the sleeve and the enlarged portion or head of the sleeve you have a horizontal shoulder, is that correct? A. That is correct.

Q. And that horizontal shoulder engages what part of the other components that go to make up the fitting or coupling?

A. That shoulder engages the clamping shoulder 15 of the nut.

Q. Is it correct for me to say that the part which you referred to as an inturned flange of the nut has a shoulder upon it which rests and engages with the shoulder formed by the enlarged portion of the sleeve? A. That is correct.

The Court: May I ask a question?

Mr. Freeman: Yes.

The Court: Is the sleeve so constructed so as to preclude the tube, at least the flared end of the tube, from touching or coming in contact with the nut? In this example you have given me, it seems that the flared end of the tube does not come in contact with the nut, it rests upon the sleeve, the sleeve comes in contact with the nut but not the tube, is that correct?

The Witness: That is correct, your Honor, the

(Testimony of John N. Wolfram.)

flare [143] does not contact the nut, the sleeve is between the flare and the nut.

The Court: Is that any part of the claims of the patent? Is there any advantage because of that?

Mr. Freeman: Yes, there is an advantage, and we point that out in that the sleeve serves as the clamping member, and that the sleeve is put under tension or expansion as we drive the nut home, and we do not want the flare to come in contact with the internal threads of the sleeve, because, if that happened, you never could back the sleeve off in order to replace the parts. Now we are going to point that out, but I did not want to answer your Honor's question.

Q. In the patent the member 5 is referred to as a male member, is that correct?

A. That is correct. That reference is on line 49 of column 1, page 1.

Q. So that the terms "male member" and "body member" are one and the same?

A. That is correct.

Q. By what name or nomenclature is the part that you have here referred to as the "sleeve" specified in the patent?

A. In column 2, beginning with line 18, it is stated that the coupling, meaning the whole assembly, includes a female member formed in two sections. Then in the sentence beginning with line 23 it says that the female coupling member [144] also includes an inner clamping sleeve 16. So that the patent refers to the part which we have called the "sleeve" as an "inner clamping sleeve."

(Testimony of John N. Wolfram.)

Q. And how is the other member referred to, that is, the part that we here call a "nut"?

A. In line 19 of column 2 it is stated that the outer section or clamp nut is in the form of a sleeve having threads, and so forth. So that the part that we call a "nut" is referred to in the patent is an "outer section" or as a "clamp nut," or as an "outer sleeve."

I believe that term appears at some other point in the patent.

Q. And the part referred to as the "outer sleeve" is, in fact, the nut that is internally screw threaded? A. That is correct.

Q. And it is that part which is screw threadedly" engaged with the body member or male member 5, is that correct? A. That is correct.

Q. And the clamping sleeve of the patent is the member that we have here referred to as the sleeve?

A. That is correct.

Q. And that part cooperates and engages with the nut? A. That is correct. [145]

Q. And likewise that part called the "sleeve" or "clamping sleeve" engages with the outer surface of the flare? A. That is correct. [146]

Q. Following, perhaps, the inquiry on the part of the court with respect to the flare and its engagement with or lack of engagement with the nut, I am now going to ask you whether or not in actual practice, or in actual use of fittings of the kind here involved, it is necessary to connect and disconnect them in their course of operation or use?

(Testimony of John N. Wolfram.)

A. Yes. The usual thing is that the fittings are subjected to connection and disconnection many times.

Q. Do you know as a fact whether or not the government test requirements contemplate a specific number of connections and disconnections of the fitting, and still have a useable fitting at the end?

A. Yes. The government test specification for fittings, which is ANF 47, requires that a fitting which is to be approved for government use, must be capable of withstanding repeated connections to the extent of 15 times, not only with a normal amount of wrench pressure, but with a greater amount of wrench pressure, which might be called over-tight.

Q. So that we understand it, when you say "over-tight," you mean more than what a mechanic should apply by way of pressure for a normal connection?

A. That is correct.

Q. In other words, you exceed in test requirements [147] on the part of the government the normal position or the normal torque of the fitting?

A. That is correct. The government does set up recommended torques to be used with the couplings, as with the AN couplings.

Q. Just what do you mean by "torque"? What is torque?

A. Well, torque is the inch pounds of pressure which is applied by means of a wrench. It is the

(Testimony of John N. Wolfram.)

product of the amount of pressure which is put on the wrench in pounds, times the distance from the center of the nut at which the torque or at which the pressure is applied.

Q. And the torque pounds or the torque, as we call it, increases as the nut is screwed into the body member; correct? A. That is correct.

Q. So that you have a normal torque designated or suggested by the government for normal installation, correct?

A. That is correct. If the coupling is assembled with the torque which is recommended, the joint should be leakproof and entirely satisfactory. But they require that the coupling be capable of withstanding greater torques than those recommended, because it is difficult to positively control the actual amount of torque which a mechanic will put [148] on the coupling.

Q. In other words, you have the independent judgment of the mechanic, who uses the fitting, to take into consideration? A. Very much so.

Q. And notwithstanding the over-torqueing requirements, the fitting still must be a useable fitting after 15 assemblies and disassemblies, or 15 uses?

A. That is correct. That is what the government specification requires.

The Court: Mr. Freeman, may I ask you a question?

Mr. Freeman: Yes, sir.

The Court: Is it a contention in this case that the plaintiff has the patent upon the theory of keep-

(Testimony of John N. Wolfram.)

ing the flare, the surface of the flare, from touching the inner surface of the nut, or is that in the public domain? That feature alone now?

Mr. Freeman: Well, I would say that feature alone is in the public domain. However, the relationship of the sleeve, the angle of the sleeve, the nut, and its cooperation with the sleeve, prevents or eliminates in a tube of this kind having the flare move on in to contact with the nut, because if that happened, you would then have jamming.

The Court: What you contend is that although that is in the public domain, the use, as you put it, is not in the [149] public domain?

Mr. Freeman: That is correct.

The Court: All right.

Q. (By Mr. Freeman): Turning now to page 2 of the patent, starting at about line 11, will you tell me what occurs in the coupling from the time it is loosely connected, as shown in Fig. 2 of the drawing, and the time that the coupling is tightened with the correct amount of torque, as is shown in Fig. 3 of the patent?

A. As stated, beginning with line 11, column 1, of page 2, Fig. 2, of the drawing illustrates the partial assembly of the coupling, and in Figs. 1 and 3, the complete assembly or fully-clamped condition of the parts is shown. The specification goes on to say that:

“It will be observed by reference to these figures that during the assembly of the coupling

(Testimony of John N. Wolfram.)

the nose 19 alone first contacts the outer surface 11 of the tube flare,"

this being what we have referred to as initial toe contact. The specification then continues and says:

"and upon continued application of end thrust by the screwing on of the member 12 and engagement of the clamping shoulders 15 and 20, the head 17 will be spread or displaced radially outwardly to store gripping tension in said head [150] and move forwardly along the flared end of the tube to cause the clamping surfaces 11, 18, and 7, 10 to tightly contact throughout the whole of their respective areas."

This discussion has been describing the expansion or spreading action of the head of the sleeve and the storing of gripping tension in the sleeve. The gripping tension we also refer to as a hoop tension and it is brought about by the expansion of the sleeve, which places it under a tensile strength and which results in the sleeve head trying to contract back to its original position, and this contracting force results in a gripping tension upon the flare of the tube. [151]

Q. So that as you tighten up the nut, the head of the sleeve is expanded within its elastic limits, is that correct? A. That is correct.

Q. And then when you disassemble for reuse or for services of any of the hydraulic systems on an aircraft or other installations, the sleeve then resumes its initial or original position?

(Testimony of John N. Wolfram.)

A. That is correct.

Q. So that when you use the same fitting over again, you again place the sleeve under a tension or a tendency to contract? A. That is correct.

Q. In other words, is it correct for me to say that the sleeve of the fitting is expanded when you bring about a sealing connection, and yet the sleeve itself is tending to push inwardly radially and thus hold the flare firmly against the body member, that is, the inclined portion on the body member?

A. That is correct.

Q. Incidentally, the sealing is brought about by metal to metal contact?

A. That is correct, metal to metal contact between the inner side of the flare and the beveled surface or seat on the body member. [152]

Q. By the inner side of the flare you are referring to the flare on the tube?

A. That is correct.

Q. Can either of those surfaces, that is, the contact surfaces between the body member and the inside of the flare, be roughened or serrated, or what should be the condition of the inside of the flare and the outside of the body member where they engage?

A. They should be very smooth and well-machined, precision machined, so as to obtain good sealing surfaces.

Q. And does the sleeve itself bring about the necessary contact between the flare and the body member to give us the sealing action required?

(Testimony of John N. Wolfram.)

A. Yes, because the sleeve is the member that is actually in contact with the flare of the tube to press it into tight engagement with the seat on the body.

I might continue with this paragraph that I was quoting from.

Q. Proceed.

A. On line 26 of column 1, page 2, it is stated:

“During the displacement or outward spreading of the head 17,”

That is the head of the sleeve.

“the wall 21,”

Which, again, is the wall of the sleeve. [153]

“will approach the adjacent wall of the sleeve member 12,”

Which is the nut.

“but the degree of taper of said head wall”

And that, again, is the head wall of the sleeve.

“is such that it will never contact and bind against said sleeve member wall.”

Which is the nut wall.

Turning to the figures of the patent drawings, this means that the angle on the outer wall of the sleeve head, indicated by the small letter d is such that when the sleeve head expands during the clamping action, all of the clearance between the sleeve head wall 21 will not be taken up at the lower end adjacent the numeral 19, so that there will be a space remaining between this wall at the point 19 and the inner wall of the nut.

(Testimony of John N. Wolfram.)

Beginning with line 33 of column 1, page 2, of the specification, it is also stated that:

“It is noted that the clamping shoulder on the head 17 is spaced a distance back from the inner flare surface of said head and the outer surface of the head and said inner wall of the coupling are so dimensioned that the head will contact with the nut in the region of the clamping shoulder, while the remaining portion of the head is free from [154] contact with the coupling member, and, therefore, the clamping force of the head against the tube is determined by the spring tension of the metal forming the head. In other words, the inner flare surface of the sleeve will yieldingly clamp the flared tube end while unlimited expansion of that portion of the head adjacent the clamping shoulder will be prevented.”

Thus, referring back to the drawings, there is sufficient room at the lower end of the sleeve to accommodate all of the expansion that will occur during the normal makeup of the fitting without putting the lower end of the sleeve into contact with the wall. While at the upper end of the sleeve the clearance is initially closer so that the expansion will be limited.

Mr. Freeman: I am just going to get into another phase. I want to check my drawings, and, also, I furnished some exhibits to opposing counsel, so that we will not take the court's time if we could start our 15-minute recess now, your Honor.

(Testimony of John N. Wolfram.)

The Court: All right. We will take a recess now for 15 minutes.

(A recess was taken.) [155]

Mr. Freeman: If your Honor please, I think yesterday there was some question about the cessation of hostilities that came up and you asked for a little information. I have the President's proclamation with regard to cessation of hostilities. I am going to ask Mr. Lyon to read it into the record at this time, if I may.

The Court: I have no objection.

Mr. Lyon: I am reading from the Federal Register of January 1, 1947, Title 3—The President, Proclamation 2714.

“Cessation of Hostilities of World War II by the President of the United States of America, a Proclamation.

“With God's help this nation and our allies, through sacrifice and devotion, courage and perseverance, wrung final and unconditional surrender from our enemies. Thereafter, we, together with the other United Nations, set about building a world in which justice shall replace war. With spirit, through faith, with a determination that there shall be no more wars of aggression calculated to enslave the people of the world and destroy their civilization, and with the guidance of Almighty Providence great gains have been made in translating military victory into permanent peace. Although a state of war still exists, [156] it is at this time

(Testimony of John N. Wolfram.)

possible to declare, and I find it to be in the public interest to declare, that hostilities have terminated.

“Now, therefore, I Harry S. Truman, President of the United States of America, do hereby proclaim the cessation of hostilities of World War II, effective 12:00 o’clock noon, December 31, 1946.

“In witness whereof, I have hereunto set my hand and caused the seal of the United States of America to be affixed.

“Done at the City of Washington this 31st day of December in the year of our Lord nineteen hundred and forty-six, and of the Independence of the United States of America the one hundred and seventy-first.

“HARRY S. TRUMAN

“By the President:

“JAMES F. BYRNES

“The Secretary of State.”

The Court: Mr. Freeman, as I remember that exhibit, it was a two-pronged exhibit.

Mr. Freeman: I will be glad to go into that. I merely wanted to get into the record the question of the cessation of hostilities.

The Court: That is the question of the cessation of hostilities, [157] but——

Mr. Freeman: They will want to check it, and I thought this was an opportune time, as long as we could take it from the law library of the court.

(Testimony of John N. Wolfram.)

The Court: Very well. I just wanted to call your attention to the fact that this was to remain in effect for the duration of the present war and was to terminate upon the cessation of hostilities.

Mr. Freeman: And to terminate when we have cessation of hostilities.

The Court: It doesn't say when we have cessation. It says "upon cessation."

Mr. Freeman: We have present cessation of hostilities by the President's proclamation. I don't want to argue that for the moment.

The Court: I don't either, but I just want to call your attention to it, that that sentence includes two parts, that is, the duration of the war, and to terminate upon cessation of hostilities. It is going to take some argument to clarify that point, I think.

Mr. Freeman: I am handing your Honor a booklet consisting of a group of photostatic copies of sketches. We are going to refer to them one at a time. I have handed the defendants' counsel the first one, which I am going to ask the clerk to mark Plaintiff's Exhibit 28-A. [158]

The Court: It may be so marked.

The Clerk: No. 28-A.

(The document referred to was marked Plaintiff's Exhibit 28-A for identification.)

Q. (By Mr. Freeman): Will you please explain as briefly as you can the photostat, or Exhibit 28-A? Tell us quickly what it illustrates.

(Testimony of John N. Wolfram.)

A. This is a drawing which I made to illustrate a typical tubing installation. The drawing shows a pump and a tubing line leading from the pump to an engine or place of use of a fluid. The pump is for the purpose of delivering or forcing fluid through the tubing line to the engine, and the tubing line is shown as being connected to the pump by means of a fitting, and it is also connected to the engine by a fitting. [159]

Q. I am now handing you a photostat marked 28-B entitled 'Tubing vs. Pipe, and will ask you to explain what that is illustrative of?

A. This is a drawing which I made to illustrate a typical tubing installation with a comparable installation made with threaded pipe fittings. Figure 1 shows the tubing installation, and your Honor will note that there are two points of connection to the block member to which the tubing is connected. At each point there is a single tube fitting for connecting the tubing to the block. In Figure 2 we have illustrated the same type of installation, but with threaded pipe fittings, and it will be noted that there are five sections of pipe required, and four fittings, and in all there are eleven joints or places where a seal must be accomplished. In Figure 1 there are only two fittings, one piece of tube, and there are four joints or places where a seal must be accomplished. Thus it will be very readily apparent that a tubing installation requires fewer fittings, there are less points of possible leakage, and it is a neater and quicker and easier job to install.

(Testimony of John N. Wolfram.)

Mr. Freeman: I am going to ask that the physical exhibit that I have here be marked Plaintiff's Exhibit 29, and I will ask you quickly to compare it with the sketch that you have, Plaintiff's Exhibit 28-B. [160]

(The device referred to was marked Plaintiff's Exhibit 29, for identification.)

The Witness: The physical exhibit 29 is a physical embodiment of the installation shown in Exhibit 28-B. As now before us it is provided with the threaded pipe fittings and corresponds to Figure 2 of Exhibit 28-B.

Q. (By Mr. Freeman): That is the lower figure of Exhibit 28-B? A. That is correct.

Mr. Freeman: I would like to offer in evidence the physical device just referred to as Plaintiff's Exhibit 29.

The Court: It may be received.

(The device, heretofore marked Plaintiff's Exhibit 29, for identification, was received in evidence.)

Mr. Freeman: Did you see it?

Mr. Huebner: No, but that is all right. It apparently is just a contrast of pipe and tubes.

The Court: I think counsel will agree that this is a great advantage over the old system, there is no comparison between a tube installation and a pipe installation.

Mr. Huebner: There isn't. They had flared tubes on automobiles back in 1902. They wouldn't

(Testimony of John N. Wolfram.)

use an iron pipe to connect a gasoline tank with a carburetor even back in 1902. I don't see the materiality, but I am not objecting.

Q. (By Mr. Freeman): I am going to hand you a piece of [161] tubing with some fittings on it, which has been marked for identification as Plaintiff's Exhibit No. 30, and will ask that you quickly explain it.

A. The tubing assembly marked Exhibit 30 is a tube with fittings on the ends corresponding to the tubing shown in Figure 1 of Exhibit 28-B, and is adapted to be mounted upon the Exhibit 29 in place of the threaded pipe fittings now thereupon it.

Q. And the physical specimen that you have in your hand, Plaintiff's Exhibit 30, is illustrative of the tubing shown in Figure 1 of Plaintiff's Exhibit 28-B, is that correct? A. That is correct.

Mr. Freeman: I should like to offer in evidence the drawing Plaintiff's Exhibit No. 28-B, and also the physical specimen of tubing as Plaintiff's Exhibit 30.

The Court: They may be received.

(The document referred to was marked Plaintiff's Exhibit 28-B, and the device was marked Plaintiff's Exhibit 30, and both were received in evidence.)

(Plaintiff's Exhibit 28-C, for identification, was marked by the clerk.)

Q. (By Mr. Freeman): I am going to ask you to turn to the drawing entitled "Tubing vs Pipe"

(Testimony of John N. Wolfram.)

which has been marked Plaintiff's Exhibit 28-C, and I will ask you to quickly explain [162] what it illustrates.

A. Exhibit 28-C illustrates in Figure 1 an end of a threaded pipe, partly in cross-section. It shows the heavy wall which is necessary to accommodate the cutting of the threads onto the pipe. Figure 2 shows a comparable size piece of tubing, also partly in cross-section, and with the one end flared. It will be noted that the tubing wall is considerably thinner than the wall of the pipe, since no extra wall thickness need be provided to accommodate threading.

Mr. Freeman: I am going to offer in evidence as Plaintiff's Exhibit 28-C the drawing entitled "Tubing v. Pipe."

The Court: It may be received.

(The drawing, heretofore marked Plaintiff's Exhibit 28-C, for identification, was received in evidence.)

Q. (By Mr. Freeman): I am going to ask you to next turn to the drawing entitled "Typical Fitting for Lead Pipe," which has been marked 28-D.

Mr. Huebner: Are you offering that, Mr. Freeman?

Mr. Freeman: No, I am not offering it. I am just asking that it be marked for identification. If I should slip in by accident an offer when I don't intend to, you can certainly object to it.

Mr. Huebner: I want to object to that on the

(Testimony of John N. Wolfram.)

ground that it is irrelevant and immaterial and has nothing to do with the [163] issues. It isn't proven, anyway. There is no foundation laid for it.

Q. (By Mr. Freeman): I am going to ask you what is illustrated in Plaintiff's Exhibit 28-D, for identification. [164]

A. Exhibit 28-D illustrates a typical fitting for use with lead pipe, that is, pipe made of lead material.

Q. Did you make that drawing yourself?

A. Yes, I made this drawing.

Q. Have you made up any fittings or used any lead pipe with fittings?

A. Yes, sir. I made up several fittings for lead pipe. However, the fittings I made up do not coincide exactly with the fitting shown in this Exhibit-D.

Q. Tell me, in the fittings you made up where you used lead pipe, what happens to the flare, that is, the flare of the lead pipe, as you screw the nut onto the body member?

A. The lead pipe is quite soft and pliable and it flows quite readily, and it is impossible to put any appreciable amount of wrench pressure upon the fitting without causing the lead to flow and to squeeze out between the clamping surfaces which engage the flare, and to thin out the lead flare to the point where it is extremely weak and would not hold appreciable pressure or pull-out strength upon the pipe.

Q. Did you find from the experience that you had with fittings and lead pipe that when you apply pressure onto the nut to move the sleeve in engage-

(Testimony of John N. Wolfram.)

ment with the flare, that some of the lead pipe flowed into the threads or it contacted the threads of the nut?

A. Yes, very definitely. The metal that is between [165] the clamping surfaces of the nut and body, as it squeezed, it flows from between the surfaces and part of this material flows into the threads of the nut.

Q. Would that hinder or interfere with the ease of removing the nut?

Mr. Huebner: Your Honor, I object to this specific question in an endeavor to stop this line of examination as not relevant or material. We are not arguing here about lead pipe. We are arguing about fittings and patents on fittings.

The Court: I don't know. He is trying to establish that this is much superior to any other fitting. I don't think that is an issue in this case. I think all parties agree, including the court, that this is much superior.

Mr. Freeman: If your Honor will recall, they held up here an illustrative drawing in the opening statement, to which I made no objection at that time, of a publication or a book called Bjorling. It is entitled "Lead Fittings." If I can get **Mr. Huebner** or the defendants to agree with me that you have a different problem in connection with fittings for lead, then I will not ask any further questions with respect to lead pipe.

The Court: I don't think there is any question

(Testimony of John N. Wolfram.)

here that there is a different problem with lead than there is with tubing. [166]

Mr. Huebner: As far as the use of lead is concerned, your Honor, naturally it is heavier than aluminum for a given volume, and they have used aluminum and in some cases they have used steel. My point is we are dealing with fittings and parts of fittings, and not the material of the tube which is clamped by the fitting. There might be a fitting which is adaptable for use with flared lead tubing, one adaptable for use with flared aluminum tubing, or with flared steel tubing, under some circumstances, the identical fitting that is used with aluminum may be used with lead, so there is a reason for using lead tubing.

The Court: I think one of the desirable features of these fittings, is the fact that they can be disengaged very readily and the tubing can be removed and replaced, and one of the reasons they can be disengaged is the fact that no part of the tubing is allowed to come in contact with the threads, and consequently no part of the tubing is allowed to become deposited in the threads. With lead pipe, you can very easily see from this drawing that lead pipe does flow into the threads and, consequently, makes it much more difficult to change a fitting with a lead installation than it does with aluminum. No question about that. I will sustain the objection.

However, if counsel raises any point on this matter, why, then, I will allow you to introduce evidence on it, but I [167] think it is immaterial at this time.

(Testimony of John N. Wolfram.)

Mr. Freeman: Then I understand and I appreciate the court's giving me the opportunity to put in additional evidence which should go in as part of our *prima facie*, in the event that they produce fittings applicable to lead.

The Court: If they make any issue as to the question of lead fittings, I will let you go back and put in this evidence.

Mr. Freeman: Thank you.

Mr. Huebner: In order to avoid any mix-up in Mr. Freeman's presentation, I may state, your Honor, one of our prior art publications, which I did show a drawing of, is a fitting which is referred to as being used in connection with a lead tubing. The fitting isn't lead but the tubing connected with it was. So if that is going to be considered introducing the subject of lead, I had better withdraw the objection at this point. As a matter of fact, some of Parker's own literature refers to the use of his own fittings with lead tubing.

The Court: Well, I think we can get the evidence in in less time than we can argue about it.

Mr. Huebner: I think we can.

Mr. Freeman: I think it would be better if it went in. It tells the story and the court will then have all the facts.

The Court: I will reverse my ruling and overrule the [168] objection.

Mr. Freeman: I am now going to offer in evidence as Plaintiff's Exhibit 28-D the illustrative drawing entitled "Typical Fitting for Lead Pipe."

The Court: It may be received.

(Testimony of John N. Wolfram.)

The Clerk: 28-D.

(The drawing referred to was received in evidence and marked Plaintiff's Exhibit 28-D.)

Q. (By Mr. Freeman): I am going to hand you a piece of pipe which has been marked Plaintiff's Exhibit No. 31——

The Clerk: No. 31.

(The object referred to was marked Plaintiff's Exhibit No. 31 for identification.)

Mr. Huebner: What kind of pipe?

Mr. Freeman: Lead pipe.

Q. ——and will ask you just quickly to explain what it is, although I have already answered counsel.

A. This is a short section of standard commercial lead pipe.

Q. About what is the inside diameter or the capacity, referring to it either by inches or fraction of inches?

A. The inside diameter is approximately $\frac{3}{4}$ of an inch.

The Court: Did you introduce the pipe?

Mr. Freeman: I will offer it, your Honor. [169]

The Court: It may be received in evidence.

(The object referred to was received in evidence and marked Plaintiff's Exhibit No. [170] 31.)

Q. (By Mr. Freeman): I am going to hand you a drawing marked Plaintiff's Exhibit 28-E, which is entitled "Wall Thickness of Flare Thins Out on

(Testimony of John N. Wolfram.)

Hard 'Tubes,' and will ask you quickly to explain what that drawing illustrates.

A. Exhibit 28-E illustrates the end of a hard metal tube with the end flared. The drawing further illustrates that as the tube is flared the wall thickness thins out so that the extreme end of the flare, at the region marked with the letter B, the wall thickness is thinner than at the beginning portion of the flare or the region marked A.

Mr. Freeman: I should like to offer in evidence as Plaintiff's Exhibit 28-E the drawing just referred to by the witness.

The Court: It may be received.

(The drawing referred to was marked Plaintiff's Exhibit 28-E, and was received in evidence.)

(A document was marked Plaintiff's Exhibit 28-F, for identification, by the clerk.)

Q. (By Mr. Freeman): I hand you a drawing entitled "Typical Two-piece Fitting for Thin Wall Hard Tubes," marked for identification Plaintiff's Exhibit No. 28-F, and will ask you to quickly explain it.

A. Exhibit 28-F is a drawing which I made to illustrate a typical two-piece type fitting for thin wall hard tubes. Figure 1 in this drawing shows a typical two-piece fitting of [171] this type with the parts brought together in the loose assembly or finger tight position. Figure 2 is a fragmentary view showing the relation of the seat parts and the

(Testimony of John N. Wolfram.)

flare when wrench pressure has been applied to tighten the fitting to its final position.

Q. Do you have any physical specimens, which are now in evidence, illustrating somewhat a typical two-piece fitting?

A. Yes. There are in evidence Plaintiff's Exhibits 21 and 22, which illustrate fittings of the type shown in the drawing Exhibit 28-F.

Q. That is, one is a complete unit and the other is a unit cut in half, or section cut out, for illustrative purposes?

A. That is correct. Exhibit 21 is a complete unit, and Exhibit 22 is the cut-away unit.

Q. Looking again at Plaintiff's Exhibit 28-F, for identification, and the physical device Plaintiff's Exhibit 22, would you tell me what happens as the nut is screwed into the body member?

A. As the nut is screwed into the body member the forward or lower end of the nut as viewed in this drawing presses upon the outer surface of the flare of the tube, and in turn causes the inner surface of the flare to press against the beveled seat within the body member. As the [172] nut thus presses upon the flare the forward end of the nut, or lower end, is caused to expand and to go out into radial contact with the side wall of the nut in the region immediately below the threaded, that is, the internally threaded portion of the body. When the nut at its lower end has thus expanded into contact with the body, it is backed up by the body and further expansion is limited, but the forces in the

(Testimony of John N. Wolfram.)

parts then react and cause the seat on the body, which engages the inner surface of the flare of the tube, to deform inwardly somewhat and adjust itself into perfect seating and sealing contact with the inner surface of the flare.

Q. Is it true that when the nut rotates in the typical two-piece fitting that the nut then scores or scratches the outside surface of the tube flare?

A. Yes, when the nut is rotated to bring it to its final position against the flare, that is, from the loose assembly position to the tight assembly position, it directly engages the outer surface of the flare, and either of two things could happen: either it will carry the tube around with it, in which case the tube rotates on the body seat itself and would cause scoring or scratching of the sealing surfaces on the flare and body member, or if the nut does not carry the tube around with it, then the nut rotates directly upon the outer surface of the flare, as you have mentioned, and would cause score marks to occur in the outer [173] surface of the flare.

Q. Now, if the tube twists any, is that something that can be forgotten in hydraulic installations?

A. No, it isn't to be forgotten; it is to be very seriously considered, because when the tube is twisted as its one end in this fashion, naturally the other end of the tube must be anchored to some other member and would not be subject to twisting, and if one end twists and the other end does not, that sets up a torsional strain within the tubing itself and loads it with a pre-stress condition. Pre-

(Testimony of John N. Wolfram.)

stressing of the tube in this manner is not desirable. In the first place, since tubing does not need to be threaded the wall thickness can be originally chosen to hold the pressure of the fluid which it is to contain, and the wall thickness need not be made any thicker than necessary to hold this pressure. When the tube is twisted in this fashion it sets up tensile stresses within the tube and reduces the margin that you have provided for holding the internal fluid pressure. [174]

Q. Is there any tendency when there has been scoring of the flare to set up a possible rupture of the flare or the tube?

A. Yes, very definitely. When the tube is installed in an installation, it is usually in an installation where there are moving parts close by or possibly one of the parts to which the tubing is connected may have a slight amount of relative movement compared with the other part to which the other end of the tubing is connected. This relative motion may be referred to as vibration.

Vibration is one of the most serious factors to be considered in a tubing installation, because it can quite readily bring about fracture of the tube unless it is guarded against and provided for. When a tube is vibrated to the point of failure, it is almost invariably the case that failure occurs in the region of the flare. This is probably for the reason that the flare has been stretched somewhat by the actual flaring operation, and it has been thinned out somewhat when it has been stretched out. Anything that

(Testimony of John N. Wolfram.)

you do to the flare beyond the normal flaring operation which would tend to weaken the flare just adds to the possibility of a fracture occurring in the flare sooner than you may have provided for or tried to guard against.

Q. Now, as the nut is moved to its tightened position, as illustrated in the typical two-piece fitting, Plaintiff's [175] Exhibit 28-F for identification, is it fair to say that the lower end of the nut operates as a wedge between the outer wall of the flare and the inner wall of the body member?

A. Yes, that is correct, because the lower end of the nut expands to take up whatever initial slip-fit clearance you have provided between it and the opposing wall of the body, and as soon as this clearance is taken up, then the lower end of the nut acts as a wedge between the nut wall and the flare itself to further compress or force the flare against the body seat.

Q. So, in addition to wedging due to the angular shape of the nut, that is the cross-sectional shape of the nut, you have a wedge action, and simultaneously a rotating action? A. That is correct.

Mr. Freeman: We will offer in evidence as Plaintiff's Exhibit 28-F the drawing entitled "Typical Two-Piece Fitting for Thin Wall Hard Tubes."

The Court: It may be received.

The Clerk: No. 28-F in evidence.

(The drawing referred to was received in evidence and marked Plaintiff's Exhibit 28-F.)

The Court: Mr. Freeman, before you continue, I notice it is nearly 12:00. We will take our recess now until 2:00 o'clock this afternoon. [176]

(Thereupon, at 12:00 o'clock noon, a recess was taken until 2:00 o'clock p.m., of the same date.) [177]

Los Angeles, California, Thursday, June 15,
1950, 2:00 P.M.

JOHN N. WOLFRAM

called as a witness by and on behalf of the plaintiff, having been previously sworn, resumed the stand and testified further as follows:

Direct Examination (Continued)

By Mr. Freeman:

Q. I hand you a drawing which we will mark Plaintiff's Exhibit 28-G, entitled "Typical Three-piece Fitting" and ask you to explain it briefly.

(A document was marked Plaintiff's Exhibit 28-G, for identification, by the clerk.)

A. Exhibit 28-G is a drawing which I made to illustrate a typical three-piece type fitting for thin wall hard tubes. Figure 1 is a cross-section through the coupling showing the parts in their loosely assembled condition. And Figure 2 is a fragmentary view through the seat portion and showing the relation of the parts, that is, the sleeve head and the flare of the tube and the seat on the body when

(Testimony of John N. Wolfram.)

the coupling has been tightened with a wrench.

Q. Are you through? A. Yes, sir.

Q. Do you have any physical specimen of that type of device here present? [178]

A. I have here two specimens. One is Plaintiff's Exhibit 24, which shows a coupling of this type with a portion cut away, and the other is Plaintiff's Exhibit No. 23, which shows the parts in their initial condition.

Mr. Freeman: I offer in evidence Plaintiff's Exhibit No. 28-G.

The Court: It may be received.

(The document, heretofore marked Plaintiff's Exhibit 28-G, for identification, was received in evidence.)

(A document was marked Plaintiff's Exhibit 28-H, for identification, by the clerk.)

Q. (By Mr. Freeman): I hand you a drawing marked 28-H with the heading "Three-piece Fitting Parker Patent No. 2,212,183," and will ask you to very briefly tell us what is there illustrated.

A. Exhibit 28-H is a drawing that I made to illustrate the type of coupling disclosed in the Parker patent No. 2,212,183. Figure 1 is a cross-section view through the length of the coupling showing the parts in their loosely assembled condition. And Figure 2, again, is a fragmentary view showing the seat parts after the coupling has been made wrench tight. [179]

Mr. Freeman: I will ask the clerk to mark this

(Testimony of John N. Wolfram.)

fitting as Plaintiff's Exhibit No. 32.

The Clerk: No. 32.

(The article referred to was marked Plaintiff's Exhibit No. 32 for identification.)

Q. (By Mr. Freeman): I am going to hand you a fitting marked Plaintiff's Exhibit No. 32, which is a Parker No. 24 aluminum fitting, and will ask you to describe it briefly and make any comparison you want with the sketch, Plaintiff's Exhibit 28-H.

Mr. Freeman: If I may interrupt, I am also going to ask that the No. 24 aluminum Parker fitting, which is cut in section, be likewise marked Plaintiff's Exhibit 33.

The Clerk: No. 33.

(The article referred to was marked Plaintiff's Exhibit No. 33 for identification.)

Q. (By Mr. Freeman): You might use both of them, one being a complete device and the other being a cut-in-section for better illustrating the internal arrangement.

A. The two fittings which you have handed me, Exhibits 32 and 33, are parts made in accordance with the Patent 2,212,183, as illustrated in Exhibit 28-H, and they are both of Parker manufacture and bear the Parker trademark.

Q. The one that is cut in section for illustrative [180] purposes, will you tell me, if you know, what torque or how much pressure was applied upon the nut for bringing it to the position that it is now in and what you did in connec-

(Testimony of John N. Wolfram.)

tion with cutting it in half, or cutting a section of it?

A. Exhibit 33, which is the cut-away sample, was assembled with 750 inch pounds torque. I think that number is correct. I could check it. This is the average torque that is recommended by government specifications. I say "average torque." Actually, the government specifications set out a range from minimum to maximum, and I believe that the minimum for this particular size is 600 inch pounds torque and the maximum is 900 inch pounds torque, and I used an average between them as the torque to assemble this fitting with.

After the fitting was assembled to this torque, it was carefully cut so that it is in its present condition on a milling machine and the nut has been pinned so that the parts would remain in their present position, that is, the nut has been pinned to the body at the back side.

Q. And is that to keep the parts from coming apart or being unscrewed during handling?

A. That is correct.

Q. Do you have another device where instead of pinning them, you used a plastic for retaining the parts in their position, so that when they were cut apart, they would [181] still remain in the same position?

A. Yes, we do have such a sample.

Mr. Freeman: I am going to ask the clerk to mark the device with the plastic in as Plaintiff's Exhibit No. 34.

(Testimony of John N. Wolfram.)

The Clerk: No. 34.

(The article referred to was marked Plaintiff's Exhibit No. 34 for identification.)

Q. (By Mr. Freeman): Do I understand that Exhibit No. 34 differs from Exhibit No. 33 in that Exhibit No. 33 the parts were pinned together, whereas in 34 the parts are held together by plastic? A. That is correct.

Q. Of course, plastic is not used normally in connection with the fittings?

A. No; that is correct.

Q. And that was only used illustrative in this case to retain the parts from coming apart due to the fact that they were cut in half or a section cut out? A. That is correct.

Q. And the same is true with respect to the pinning as you have referred to it in connection with Plaintiff's Exhibit 33?

A. That is correct. I might add that the plastic material was added or poured into the fitting through the two holes that you have in the side of the nut after the parts had [182] been assembled to their proper torque. The plastic was in a liquid condition and flowed into the crevices that remained and then set there. [183]

Q. After it was set, you then cut away a portion of Plaintiff's Exhibit 34, is that correct?

A. That is correct.

Mr. Freeman: I am going to offer in evidence Plaintiff's Exhibit 28-H.

(Testimony of John N. Wolfram.)

The Court: It may be received.

(The diagram, heretofore marked Plaintiff's Exhibit 28-H, for identification, was received in evidence.)

Mr. Freeman: I am going to ask that the drawing or sketch entitled "Sleeve Head Angle" be marked for identification 28-I.

(The drawing referred to was marked Plaintiff's Exhibit 28-I, for identification.)

Q. (By Mr. Freeman): In about three words will you tell us what it illustrates?

A. Exhibit 28-I is a drawing which I made to illustrate the sleeve itself taken from the Parker patent 2,212,183, and it specifically shows the angle which is on the outside surface of the head of the sleeve.

Mr. Freeman: I offer in evidence the drawing marked 28-I.

The Court: It may be received.

(The drawing, heretofore marked Plaintiff's Exhibit 28-I, for identification, was received in evidence.) [184]

(A document was marked Plaintiff's Exhibit 28-J, for identification, by the clerk.)

Q. (By Mr. Freeman): I hand you a drawing marked 28-J, and as quickly as possible will you tell us what it illustrates? The drawing is entitled "Free Expansion of Sleeve Head."

(Testimony of John N. Wolfram.)

A. This drawing illustrates the sleeve of the coupling in the dotted position, this being the position when the parts are in finger tight or loose assembly condition. The drawing also shows the same sleeve head in a full line position, and showing that the sleeve head has been expanded at its lower end and has taken up part of the initial clearance between the side wall of the sleeve head and the adjacent wall of the nut.

Q. Do I understand that the dotted line position is the initial position or what we might call finger tight position? A. That is correct.

Q. And that the solid line position is the position the parts assume after the nut has been brought up to the proper torque? A. That is correct.

Mr. Freeman: I offer in evidence the drawing marked 28-J.

The Court: It may be received. [185]

(The document, heretofore marked Plaintiff's Exhibit 28-J, for identification, was received in evidence.)

(A drawing was marked Plaintiff's Exhibit 28-K, for identification, by the clerk.)

Q. (By Mr. Freeman): I hand you a drawing marked 28-K entitled "Expansion of Sleeve Head Provides Hoop Tension." The term "Hoop Tension" was referred to earlier in connection with your description of the Parker patent. Will you please explain what the drawing illustrates?

A. This is a drawing which I made of the sleeve

(Testimony of John N. Wolfram.)

alone and showing what I call a wire hoop wrapped around the lower end of the sleeve as a means of pictorially representing hoop tension in the sleeve. The hoop tension is not initially present, of course, but is imposed when the sleeve has undergone expansion during the tightening of the coupling. When the coupling is tightened and the sleeve head expands, the metal within the sleeve head is put under tensile stress and tends to return to its initial contracted position. This tendency to return is what we refer to as the hoop tension.

Mr. Freeman: I will offer in evidence the drawing marked "Expansion of Sleeve Head Provides Hoop Tension." heretofore identified as Plaintiff's Exhibit 28-K.

The Court: May I ask a question?

Mr. Freeman: Yes. [186]

The Court: When you tighten up on these connections, in tightening up you cause friction, don't you, and friction causes heat, and heat causes expansion, is that correct?

The Witness: That is correct, your Honor.

The Court: Well, the more you tighten up, the more the heat and the more the expansion?

The Witness: Your Honor, I think that there is so very little heat generated in the ordinary operation of tightening a coupling that it can be completely ignored.

The Court: You don't get enough heat to cause any appreciable change in the volume present?

(Testimony of John N. Wolfram.)

The Witness: Not in my experience or knowledge.

Mr. Freeman: I am going to offer in evidence the three physical specimens heretofore referred to as Plaintiff's Exhibits Nos. 32, 33 and 34.

The Court: They may all be admitted in evidence.

(The drawing, heretofore marked Plaintiff's Exhibit 28-K, for identification, and the specimens heretofore marked Plaintiff's Exhibits 32, 33 and 34, for identification, were received in evidence.) [187]

Q. Will you tell us just what does expand in the fitting when it is tightened up?

A. As the fitting is tightened up, the sleeve head itself is forced downwardly onto the conical surface of the flare of the tube by the action of the nut, and it is the sleeve head itself which undergoes expansion.

The Court: Because of the pressure?

The Witness: Yes, your Honor, because of the fact that the nut is forcing it downward onto a conical surface and the cone tends to spread the sleeve.

The Court: That is because of the pressure by the nut?

The Witness: Yes, your Honor.

The Court: Not because of heat?

The Witness: Of course, if there is heat present, it would tend to cause expansion of the metal in

(Testimony of John N. Wolfram.)

itself, but I don't think that there is enough heat present to cause enough expansion that you could measure.

Mr. Freeman: I will ask the clerk to mark this drawing as Plaintiff's Exhibit 28-L.

The Clerk: No. 28-L.

(The drawing referred to was marked Plaintiff's Exhibit No. 28-L for identification.)

Q. (By Mr. Freeman): I hand you a drawing marked Plaintiff's Exhibit 28-L, which is entitled, "Hook Tension [188] Lock Nut Against Loosening." Will you please explain what you mean about the hook tension preventing the nut from loosening?

A. This is a drawing that I made based upon our Patent 2,212,183 and illustrates in the dotted position the original position of the sleeve head. The full line position of the sleeve represents the final position when it has been properly tightened. You will note that this position is out farther in a radial direction than the dotted line position, to indicate expansion of the sleeve head.

Since the expansion of the sleeve head stretches the metal of the sleeve head around the circle of the head, it puts the head under tensile stress. This tensile stress tends to cause the sleeve to return to its original position, that is, the sleeve is constantly tending to contract to the position shown in the dotted line. However, it cannot do this as long as the nut bears against the sleeve and shoulder in the

(Testimony of John N. Wolfram.)

position marked A in the drawing, since in order for the sleeve head to contract, it must slide back up the conical surface of the flare, that is, when you view the drawing, the sleeve head to contract would have to move in an upward direction.

The nut prevents this upward movement, and the reaction is taken in the threads, the threaded engagement between the nut and the body at the point marked B. [189]

This effect is quite similar to that of the commonly known and understood lock washer. If the nut should for any reason be loosened just a small part of a turn, the shoulder at the region marked A would be moved in the upward direction a slight amount. However, if it should do this, the sleeve would immediately slide up the cone of the tube flare and take up the space that would otherwise occur at the point A, and again come in contact or, probably I should say it would remain in contact with the nut shoulder at the point A so that the coupling would still remain tight. There would still be pressure between the sleeve and the nut at the point A which would cause a reaction pressure at the threads at point B and result in enough friction being retained at the point B to prevent further unloosening of the nut.

Mr. Freeman: I am going to offer in evidence the drawing just identified as Plaintiff's Exhibit 28-L.

The Court: It may be received.

The Clerk: No. 28-L.

(Testimony of John N. Wolfram.)

(The drawing referred to was received in evidence and marked Plaintiff's Exhibit No. 28-L.)

The Witness: I might make a comment here that this drawing has a little inaccuracy in that the lead line from the word "body" should extend over to the other member, rather than to the member that it does.

Q. (By Mr. Freeman): In other words, you have two [190] lead lines to the nut, and you want the lead line from the body to extend over to the body member? A. That is correct.

Mr. Freeman: With the defendants' permission, might we make that change?

Mr. Huebner: Certainly. Do anything you want him to do. The drawings, I understand, are merely illustrative of his testimony, so he is at liberty to change them if he wants.

Mr. Freeman: I already have offered it and I don't want to make any changes without everybody agreeing.

Mr. Huebner: May we see what he did so we can conform our copies?

Mr. Freeman: If the court will give me his, we will conform it.

The Court: I will conform mine.

Mr. Freeman: May I ask the clerk to mark this drawing as Plaintiff's Exhibit 28-M?

The Court: 28-M for identification.

(The drawing referred to was marked Plaintiff's Exhibit No. 28-M for identification.)

(Testimony of John N. Wolfram.)

Q. (By Mr. Freeman): I now hand you a drawing marked Plaintiff's Exhibit 28-M, and will you tell us what is there illustrated? That drawing is entitled "Free Expansion Corrects Out-of-Round Sleeve." [191]

A. Exhibit 29-M is another drawing which I made to indicate how expansion of the sleeve head can correct out-of-round sleeves. When sleeves are manufactured, they are usually made from solid bar material, and the hole is drilled through them, and the outside surface is properly contoured by cutting tools in an automatic screw machine, and when the parts come off the machine sometimes the cutting away of the material has changed the internal stress conditions of the material, so that if we measured the sleeve carefully across the diameter at one point and then again at another point at right angles to the first measuring point, there may be a slight out-of-round condition that may run one or two, possibly three, thousandths of an inch in some extreme, or more extreme cases, so that the sleeve head or other parts of the sleeve may actually be slightly oval.

When the oval sleeve is assembled with a coupling and a piece of tube, it would not seat perfectly all around the diameter upon the flare. When the sleeve head then expands as wrench pressure is applied, it will tend to take a round position, or whatever position the outer surface of the flare is. In other words, if the flare is not perfectly round and is at slight variance with the roundness of the sleeve, the sleeve

(Testimony of John N. Wolfram.)

will tend to conform itself to the surface of the flare, and it is expansion and the yielding or movement of the sleeve head that permits this. [192]

Mr. Freeman: I am going to offer in evidence the drawing entitled "Free Expansion Corrects Out-of-round Sleeves" as Plaintiff's Exhibit 28-M.

The Court: It may be received.

(The document referred to was marked Plaintiff's Exhibit 28-M, and was received in evidence.)

(A document was marked Plaintiff's Exhibit 28-N, for identification, by the clerk.)

Q. (By Mr. Freeman): I hand you a drawing marked Plaintiff's Exhibit 28-N, entitled "Expansion Converts Toe Contact to Area Contact," and I think you mentioned earlier this morning something about pivotal or pivotal movement and line contact, and I wish you would tell us just what this drawing illustrates.

A. This is a drawing which I made to illustrate how the sleeve head as it expands converts initial toe contact between the sleeve and the flare to area contact. The dotted lines show the initial position of the lower end of the sleeve as they appear in the finger tight or loose assembly. As the sleeve head expands during the process of tightening with a wrench, the expansion takes the form of a pivotal movement. When we consider any one cutting plane through the longitudinal direction of the coupling, the pivot point for this movement is located some-

(Testimony of John N. Wolfram.)

where above the shoulder contact between the nut and the sleeve. Since the expansion is of a pivoted [193] nature when we consider any one cutting plane, the initial angle of the outside of the sleeve head decreases. Likewise, the angular position of the inside seat or flared surface of the sleeve head changes. Initially, the bottom portion of the sleeve head engages in line contact with the flare of the tube, and then the flare surface of the sleeve head diverges somewhat from the outer surface of the tube flare. However, the pivoted movement of the sleeve head causes the angular position of the inside surface of the flared part of the sleeve head to change so that it will conform more nearly with that of the flare of the tube.

Q. I am wondering if I could ask you to take Plaintiff's Exhibit 28-H, for identification, and put a lead line on there with the word "Body" opposite the body.

(Witness does as requested.)

Mr. Freeman: I am going to offer in evidence the drawing No. 28-N.

The Court: It may be received.

(The drawing, heretofore marked Plaintiff's Exhibit 28-N, for identification, was received in evidence.)

Q. (By Mr. Freeman): I think you have said with respect to many of these drawings under the general heading of Plaintiff's Exhibit No. 28, that all of those were made by yourself?

(Testimony of John N. Wolfram.)

A. That is correct, I have made this entire series of drawings. [194]

Q. That is, you personally made them?

A. That is correct.

(A document was marked Plaintiff's Exhibit No. 28-O, for identification, by the clerk.)

Q. (By Mr. Freeman): I hand you a drawing marked Plaintiff's Exhibit No. 28-O and will ask you to very briefly describe it.

A. This is a drawing which I made to illustrate the point that expansion of the sleeve makes the amount of nut turning less critical. When the coupling is being assembled the nut is turned with a wrench from the finger tight position to the final position. The tubing being a hard metal tube does not need to be compressed very much in order to create a fairly large sealing stress, as you might call it, between it, that is, between the inner flare surface, and the body. Therefore, there is not a great deal of actual turning movement of the nut required to bring about this sealing stress. In fact, the wrench torque goes up quite rapidly from the finger tight position to the final position. When the sleeve head can expand, as it does, in the fittings here involved, part of the turning movement of the nut is translated into vertical movement of the sleeve, which tends to compress the flare itself, as I have indicated on the drawing here by the expression "Compression of Flare," and part of the turning movement of the nut is translated into radial [195] movement,

(Testimony of John N. Wolfram.)

or expansion of the sleeve head. Thus, if we take and turn a nut slightly more than it should be turned during normal make-up, there will be a part of the turning movement applied to radial expansion and part to compression of the flare, and there won't be as much damage or needless compression put upon the flare as if we do not have expansion of the sleeve head.

Q. I hand you a drawing marked Plaintiff's Exhibit 28-P, for identification, entitled "Angle Provides More Room for Expansion Where Expansion Is Greatest." Will you please explain just what you mean by that heading and what the drawing illustrates?

(The document was marked Plaintiff's Exhibit 28-P, for identification, by the clerk.)

A. As I have said before, the expansion of the sleeve head is of a pivoted type when we consider one plane through the sleeve head. Since it is pivoted, then the points of the sleeve head which lie closest to the pivot point will not move as far as the points which lie a greater distance from the pivot point. The points of the sleeve, which are at the lower end of the head, as viewed in this drawing, are farther from the pivot point than the points of the sleeve head toward the upper end of the drawing. Therefore they move a greater distance and the sleeve head angle provides additional space between the sleeve head and the wall [196] of the nut to accommodate this additional or greater movement.

Q. In other words, the sleeve head as it expands

(Testimony of John N. Wolfram.)

more towards its lower end is provided with room for such expansion without necessarily contacting the inner wall of the nut proper?

A. That is correct.

Mr. Freeman: I am going to offer in evidence the drawing entitled "Expansion Makes Amount of Nut Turning Less Critical," as Plaintiff's Exhibit 28-O, and the drawing or sketch just referred to entitled "Angle Provides More Room for Expansion Where Expansion Is Greatest," as Plaintiff's Exhibit 28-P.

The Court: They may be received.

(The documents, heretofore marked Plaintiff's Exhibits 28-O and 28-P, respectively, for identification, were received in evidence.)

(A document was marked Plaintiff's Exhibit 28-Q, for identification, by the clerk.)

Q. (By Mr. Freeman): Earlier this morning in connection with the Parker patent you mentioned shoulder-to-shoulder contact, that is, between the sleeve and the nut, and I am going to give you a drawing which has been marked for identification Plaintiff's Exhibit No. 28-Q and will ask you to explain what it is and its connection, if any, with your earlier testimony about the shoulder-to-shoulder contact or area of contact. [197]

A. This is a drawing which I made to indicate the fact that the angle on the outside of the sleeve head permits a maximum of shoulder contact between the nut and the sleeve.

(Testimony of John N. Wolfram.)

I have already pointed out that the sleeve head undergoes a pivotal movement as it expands, and that sufficient clearance is provided at the lower end of the sleeve head as viewed in this drawing to accommodate this expansion, and that the expansion at this point is greater than it is at the upper end of the sleeve head. Since there is not as much expansion at the upper end of the sleeve head, it is not necessary to provide as much room for expansion.

The angle on the outside of the sleeve head provides a means for providing the large clearance at the bottom of the sleeve head and at the same time to fill in some of the clearance which would otherwise appear at the top of the sleeve head, and which is not necessary, and by such means to provide as wide a shoulder of contact or area of contact between the nut shoulder and sleeve shoulder as possible.

Q. Do you have greater distribution of the load or pressure when the shoulder-to-shoulder contact is of greater area?

A. Yes. The amount of wrench pressure which is applied to these fittings has been largely determined by the amount of pressure which must be applied to the flare to establish a seal so that we can more or less consider the wrench [198] pressure a fixed or arbitrary value.

The wrench pressure is transmitted by the nut to the sleeve at the shoulder contact area which we are speaking of. If this area is quite small, the unit pressure will be quite large, and that would cause a gouging and distortion of the parts. It is desirable

(Testimony of John N. Wolfram.)

to keep this bearing area or contact area as large as possible in order to avoid gouging and to keep the unit pressure as low as possible so as to avoid damage to the parts.

Mr. Freeman: I offer in evidence as Plaintiff's Exhibit Q the drawing entitled "Angle Permits Maximum Shoulder Contact."

The Court: It may be received.

The Clerk: No. 28-Q.

(The drawing referred to was received in evidence and marked Plaintiff's Exhibit No. 28-Q.)

Mr. Freeman: I will ask the clerk to mark this drawing as Plaintiff's Exhibit 28-R.

(The drawing referred to was marked Plaintiff's Exhibit No. 28-R for identification.)

Q. (By Mr. Freeman): I hand you a drawing which has been marked Plaintiff's Exhibit 28-R, entitled "Angle Facilitates Disassembly of Sleeve From Nut," and I wonder if you would point out just what you mean by the angle on the outside of the sleeve assisting or facilitating easy disassembly of [199] the parts.

A. This is a drawing which I made to illustrate the point that the angle on the outside of the sleeve head facilitates disassembly of the sleeve from the nut. As shown in the drawing, it sometimes occurs, depending possibly on the type of machining practice employed in making the nut, that the nut

(Testimony of John N. Wolfram.)

threads will kick up a small burr on their small diameter. This is marked on the drawing as thread burr. The angle of the sleeve head provides a means of getting the sleeve head started past the thread burrs, if they should occur, so that the sleeve may more readily be disassembled from the nut.

Mr. Freeman: I am going to offer the drawing just referred to as Plaintiff's Exhibit 28-R.

The Court: It may be received.

The Clerk: No. 28-R in evidence.

(The drawing referred to was received in evidence and marked Plaintiff's Exhibit No. 28-R.)

Mr. Freeman: I ask that the clerk mark this as 28-S, this drawing.

(The drawing referred to was marked Plaintiff's Exhibit No. 28-S for identification.)

Q. (By Mr. Freeman): I think I might speed this up a little bit. I am going to ask you to look at the drawing which has been marked for identification as Plaintiff's [200] Exhibit 28-S and will ask you to state whether or not it illustrates the point that the angle provides additional clearance to avoid locking of the sleeve to the nut.

A. Yes, it does.

Mr. Freeman: I am going to offer the drawing just referred to as Plaintiff's Exhibit 28-S.

The Court: It may be received.

The Clerk: 28-S in evidence.

(The drawing referred to was received in evi-

(Testimony of John N. Wolfram.)

dence and marked Plaintiff's Exhibit No. 28-S.)

Mr. Freeman: I will ask the clerk to mark this drawing as Plaintiff's Exhibit 28-T.

(The drawing referred to was marked Plaintiff's Exhibit No. 28-T for identification.)

Q. (By Mr. Freeman): I hand you a drawing marked Plaintiff's Exhibit 28-T, entitled "Angle Prevents Scoring of Flare," and will you, as quickly as possible, state just what you mean to illustrate by that drawing?

A. We have already stated that the angle of the sleeve accommodates expansion of the sleeve head without causing the sleeve head to contact the nut wall in the normal tightened condition. If it should contact the nut wall, it becomes jammed with the nut, and from there on will turn with the nut so that the two parts, that is, the nut and the sleeve, actually function as a single unit. They both turn [201] together.

If this should happen, then the sleeve will rotate upon the flare in the same manner as the prior two-piece fittings which we have mentioned, and is likely to cause scoring or marking of the flare, which may lead to fracture or failure of the flare.

Mr. Freeman: I will ask the clerk to mark this drawing as 28-U.

(The drawing referred to was marked Plaintiff's Exhibit No. 28-U for identification.)

Mr. Freeman: I hand you a drawing which is

(Testimony of John N. Wolfram.)

marked Plaintiff's Exhibit 28-U, and will again ask you, as briefly as possible, to state what it illustrates.

The Witness: This is another drawing which I made to illustrate the point that if the sleeve should become locked in the nut because of expansion of the sleeve head to take up all of the clearance between the sleeve and the nut, the sleeve will then turn with the nut as a unit, and may cause the tube to twist and thus cause a prestressing of the tube. I mentioned that this morning in connection with the two-piece fittings.

Q. (By Mr. Freeman): So that in the event you do have a three-piece fitting and the parts interlock, you are then operating substantially as a two-piece fitting? A. That is correct.

Mr. Freeman: I will ask the clerk to mark this drawing [202] as 28-V.

(The drawing referred to was marked Plaintiff's Exhibit No. 28-V for identification.)

Q. (By Mr. Freeman): I hand you a drawing which has been marked Plaintiff's Exhibit 28-V, entitled "Angle Facilitates Disassembly of Bent Tubes." Now, will you explain just what you mean to illustrate by that drawing?

Mr. Huebner: Incidentally, what angle is he talking about, do you know?

Mr. Freeman: He is talking about the sleeve angle.

Mr. Huebner: On the inside or the outside?

Mr. Freeman: On the outside of the sleeve.

The Witness: This is a drawing which I made to

(Testimony of John N. Wolfram.)

illustrate the fact that the angle, that is, the outside angle of the sleeve head helps to facilitate disassembly of bent tubes. This follows from the fact that when the angle is present and the sleeve expands, it does not lock with the nut, and the nut can therefore be moved freely on the tube.

In close quarter installation, it is often difficult to put the tube in place over the body, that is, with the flare properly seated upon the bevel of the body. This is particularly true of the second end that is attached. That is, after the first end is attached, the second end of the tube may be difficult to put into place. This is a very definite problem in connection with aircraft where there are very many close quarter [203] installations.

In Figure 1 of this drawing I have illustrated the point that when the nut is not locked to the sleeve and there is a bend in the tube close to the end of the sleeve, the nut may be backed away over the bend and the tube then need only be sprung the distance A, so as to clear the beveled surface of the fitting body.

In Figure 2 I have illustrated the condition that obtains when the nut has locked to the sleeve so that it cannot be backed away from the sleeve. The sleeve being close to the bend can, also, not be backed any substantial distance from the flare of the tube.

In order to disassemble this joint it is then necessary to spring the tube the distance B, which is much greater than the distance A of Figure 1, in order to have the nut clear the end of the body.

(Testimony of John N. Wolfram.)

The Court: Before you start with another drawing it is time to take our afternoon recess. We will now recess until 3:15.

(A recess was taken.)

(A diagram was marked Plaintiff's Exhibit 28-W, for identification by the clerk.)

Q. (By Mr. Freeman): I hand you a drawing marked Plaintiff's Exhibit 28-W, and will you quickly tell us what it is? The title is "Angle Facilitates Disassembly of Damaged and Tagged [204] Tubes."

A. This is a drawing which I made to illustrate how the sleeve head angle by preventing locking of the sleeve to the nut will facilitate disassembly of the tubes when there is a damaged part near the tube to prevent the sleeve from being backed off, or when there is an identification tape or tag near the end of the sleeve.

Q. Now, the angle that you have been talking about up to now is the angle on the outside of the sleeve?

A. On the outside of the sleeve head, that is correct.

Q. And that is the angle that is illustrated on the exhibit marked 28-I, is that correct?

A. That is correct.

(A diagram was marked Plaintiff's Exhibit 28-X, for identification, by the clerk.)

Q. (By Mr. Freeman): I hand you a drawing

(Testimony of John N. Wolfram.)

marked "Differential Angle" and will ask you to state just what it illustrates.

A. This drawing illustrates the differential angle as it appears in the Parker patent 2,212,183.

Q. That is identified as Plaintiff's Exhibit 28-X.

Does that drawing illustrate the open space or the space between the inside of the sleeve angle and the outside of the flare shown in Figure 2 of the patent?

A. Yes, it does. [205]

(The diagram was marked Plaintiff's Exhibit 28-Y, for identification, by the clerk.)

Q. (By Mr. Freeman): Will you next refer to the drawing entitled "Toe Contact Facilitates Formation of Holding Nub" which has been marked for identification 28-Y?

A. This is a drawing which I made to illustrate how the initial toe contact of the sleeve with the flare facilitates the formation of a holding nub upon the flare itself.

(Diagrams were marked Plaintiff's Exhibits 28-Z to 28-EE, for identification, respectively, by the clerk.)

Q. (By Mr. Freeman): I am going to hand you drawings which have been marked Plaintiff's Exhibits 28-Z to 28-EE, inclusive, and I am going to ask you to give the heading and briefly refer to each of those drawings by identification number. [206]

A. Plaintiff's Exhibit No. 28-Z illustrates how the initial toe contact between the sleeve head and the flare tends to produce a line tight seal between

(Testimony of John N. Wolfram.)

the inner surface of the flare and the body member.
Plaintiff's Exhibit No. 28-AA——

Q. Give the title of that, please.

A. ——entitled "Toe Contact Resists Vibration Failure," illustrates how the differential angle or toe contact operates to increase the resistance to failure through vibration, that is, failure of the tube flare.

Plaintiff's Exhibit No. 28-BB is entitled, "Toe Contact Compensates for Misaligned Flares," and illustrates how the initial toe contact between the sleeve and the flare helps to compensate for the misalignment of the flare with the nose of the body.

Plaintiff's Exhibit No. 28-CC is entitled, "Toe Contact Avoids Weakening of the Flare at Its Base," and indicates or illustrates how this is brought about.

Plaintiff's Exhibit No. 28-DD is entitled, "Toe Contact Facilitates Expansion of Sleeve Head." This drawing illustrates how an initial contact between the sleeve and the flare at the toe of the sleeve helps to produce expansion of the sleeve head.

Plaintiff's Exhibit No. 28-EE is entitled, "Toe Contact Increases Wrench Torque Range," and illustrates how the toe [207] contact will bring this result into being.

Mr. Freeman: I would like to offer in evidence the drawings referred to by the witness starting with Plaintiff's Exhibit 28-T, including 28-Z, and starting with 28-AA and concluding with 28-EE.

The Court: They may be received.

(Testimony of John N. Wolfram.)

(The drawings referred to were received in evidence and marked Plaintiff's Exhibits 28-T to 28-EE, inclusive.)

Mr. Freeman: I am going to ask now that all of these loose drawings be put into a book and collectively offered as Plaintiff's Exhibit 28, for convenience.

The Court: They may be put in the book.

Mr. Freeman: I am going to ask that the physical device of an iron fitting be marked for identification as Plaintiff's Exhibit No. 35, and a similar one with a cut-out portion filled with plastic be marked Plaintiff's Exhibit No. 36.

The Clerk: No. 35 and No. 36.

(The devices referred to were marked Plaintiff's Exhibits 35 and 36 for identification.)

Q. (By Mr. Freeman): I will ask you to state whose manufacture these are and what they illustrate.

A. Plaintiff's Exhibit No. 35 is a size 24 steel fitting manufactured by the Parker Appliance Company and made in accordance with the Parker patent 2,212,183. This [208] fitting does not have any of its parts cut.

Q. And as shown there is just in loose or finger-tight position?

A. That is correct. Plaintiff's Exhibit No. 36 is a fitting similar to Plaintiff's Exhibit No. 35. It is also of Parker Appliance Company manufacture. It

(Testimony of John N. Wolfram.)

has been assembled to the normal torque and filled with plastic and then cut away. [209]

Mr. Freeman: I am going to offer in evidence the two Parker fittings as Plaintiff's Exhibits 35 and 36.

The Court: They may be received.

(The fittings referred to, heretofore marked Plaintiff's Exhibits 35 and 36, for identification, respectively, were received in evidence.)

Mr. Freeman: Will you mark these, please?

(The devices referred to were marked Plaintiff's Exhibits 37 and 38, for identification.)

Q. (By Mr. Freeman): I hand you two physical devices marked Plaintiff's Exhibit No. 37 and Plaintiff's Exhibit No. 38, and will you quickly tell us what they are, whose manufacture, and what they illustrate?

A. Plaintiff's Exhibit No. 37 is a size 4 aluminum alloy fitting made in accordance with the patent, and with the parts in loosely assembled condition.

Exhibit No. 38 is a fitting similar to Plaintiff's Exhibit No. 37, except that it has been assembled to normal torque, filled with plastic, and then cut away. Both of these fittings are of Parker manufacture.

Mr. Freeman: I am going to offer the two fittings just referred to by the witness as Plaintiff's Exhibits 37 and 38.

The Court: They may be received.

(Testimony of John N. Wolfram.)

(The devices, heretofore marked Plaintiff's Exhibits 37 and 38, for identification, respectively, were received in evidence.) [210]

Q. (By Mr. Freeman): I might ask you, did you mention the material of those fittings? Were those aluminum?

A. I believe I mentioned that they were aluminum.

Mr. Freeman: Will you mark these, please?

(The devices referred to were marked Plaintiff's Exhibits 39 and 40, for identification.)

Q. (By Mr. Freeman): I now hand you two physical devices marked Plaintiff's Exhibit No. 39 and Plaintiff's Exhibit No. 40, and again will ask you what they are, whose manufacture, and what they illustrate.

A. Exhibit No. 39 is a size 4 steel fitting made by the Parker Appliance Company in accordance with patent 2,212,183. The parts are in loosely assembled condition.

Plaintiff's Exhibit No. 40 is a similar fitting, also of Parker manufacture, and assembled to normal torque, filled with plastic and then cut away.

Mr. Freeman: I am going to offer the two exhibits just referred to by the witness as Plaintiff's Exhibits 39 and 40.

The Court: They may be received.

(The devices, heretofore marked Plaintiff's Exhibits 39 and 40, for identification, respectively, were received in evidence.)

(Testimony of John N. Wolfram.)

Mr. Freeman: Will you mark these, please?

(The devices referred to were marked Plaintiff's Exhibits 41 and 42, for identification, respectively.) [211]

Q. (By Mr. Freeman): I am going to hand you a device marked Plaintiff's Exhibit 41, for identification, and will ask you to tell us what it is and how it compares with Plaintiff's Exhibit 40, and who made it, if you know.

A. Exhibit 41 is a fitting of the same size, material, and type as Plaintiff's Exhibit 40, except that it has been assembled to normal torque, cut away, then embedded in a clear plastic.

Q. So that the parts would remain in a permanent position? A. That is correct.

Q. I now hand you Plaintiff's Exhibit No. 42 and will ask you to state what it is and how it compares with any of the earlier exhibits that you have here referred to.

A. Plaintiff's Exhibit No. 42 is an aluminum fitting of the same size and manufacture as Plaintiff's Exhibit No. 38. It has been assembled to normal torque, cut away, and then mounted in clear plastic so that the parts would remain in their original condition.

Mr. Freeman: I am going to offer in evidence Plaintiff's Exhibits 41 and 42.

The Court: They may be received.

(The devices, heretofore marked Plaintiff's Exhibits 41 and 42, for identification, respectively, were received in evidence.) [212]

(Testimony of John N. Wolfram.)

Mr. Freeman: Will you mark these, please?

(The devices referred to were marked Plaintiff's Exhibits 43 and 44, for identification, respectively.)

Q. (By Mr. Freeman): I hand you two physical devices marked for identification Plaintiff's Exhibits Nos. 43 and 44, and will ask you to explain what they are.

A. Exhibit 43 is a size 8 aluminum alloy fitting made in accordance with the Parker patent 2,212,183.

Mr. Huebner: Your Honor, I move to strike that comment of the witness that it was made in accordance with the patent. Perhaps it was made to illustrate his interpretation of it, but I don't think he is entitled to use that kind of language.

The Court: I think he has been using it all afternoon.

Mr. Huebner: I finally got to the point where I thought it ought to stop.

The Court: Well, it may be a conclusion of the witness as to whether it is made in accordance with the patent or not. I think that is something for the court to determine.

I will overrule the objection. I think this witness is qualified to testify. He is an expert. It is his opinion that it is made in accordance with the [213] patent.

Mr. Freeman: I offer in evidence the——

(Testimony of John N. Wolfram.)

The Witness: I don't think I had finished.

Q. (By Mr. Freeman): I am sorry. Will you proceed and finish your answer?

A. This exhibit is of Parker manufacture and the parts are in loosely assembled condition.

Exhibit 44 is also a size 8 aluminum alloy fitting of Parker manufacture in accordance with the patent 2,212,183, and has been assembled to normal torque, filled with plastic, and cut away.

Mr. Freeman: I now offer in evidence as Plaintiff's Exhibit the Exhibits 43 and 44 in connection with the two devices just identified by the witness.

The Court: They may be received.

The Clerk: No. 43 and No. 44.

(The devices referred to were received in evidence and marked Plaintiff's Exhibits 43 and 44.)

Mr. Freeman: I will ask that these devices be marked for identification.

The Clerk: Nos. 45 and 46 for identification.

(The devices referred to were marked Plaintiff's Exhibits Nos. 45 and 46 for identification.)

Q. (By Mr. Freeman): I hand you two physical devices marked for identification, Plaintiff's Exhibits 45 and 46, and [214] will ask you to state what they are, who made them, and what they illustrate?

A. Plaintiff's Exhibit 45 is a size 8 steel fitting

(Testimony of John N. Wolfram.)

made in accordance with the Parker patent 2,212,183. It is of Parker manufacture and the parts are loosely assembled.

Plaintiff's Exhibit No. 46 is a fitting similar to that of Exhibit 45, except that it has been assembled to normal torque, filled with plastic, and the parts cut away. It is also of Parker manufacture.

Mr. Freeman: I will ask that this drawing be marked Plaintiff's Exhibit 47.

(The drawing referred to was marked Plaintiff's Exhibit No. 47 and marked for identification.)

Q. (By Mr. Freeman): I hand you a drawing marked Plaintiff's Exhibit 47, and I will ask you to compare the drawing with any of the Parker fittings that you have just referred to, that is, physical fittings.

A. Plaintiff's Exhibit No. 47 is a cross-section drawing of the type of fitting exemplified by Plaintiff's Exhibit No. 39.

Q. Now, will you point out the body portion on that drawing? A. Shall I mark it as "body"?

Q. Yes, please.

A. I am marking the body with a lead line and the [215] word "body."

Q. And also the nut with the word and lead line.

A. I am marking the nut with a lead line and the word "nut."

Q. Will you do likewise there with the sleeve?

A. Yes.

(Testimony of John N. Wolfram.)

Q. Will you tell us what you had to do with the making of the drawing from which that cut, Plaintiff's Exhibit 47 for identification, was made?

A. This drawing was made under my direction from the same dimensions used in the making of Plaintiff's Exhibit No. 39. In other words, this is a scale drawing coinciding with Exhibit No. 39, but it has been enlarged, I think, five times.

Mr. Freeman: I think I can save some time, your Honor, instead of having that drawing, Exhibit 47, marked up by this witness, to offer in evidence a similar drawing, which was referred to in the Amon deposition and in the Davies deposition and in the Ronald Berg deposition, and therefore I would like to offer in evidence as Plaintiff's Exhibit No. 48 the drawing referred to in the Amon deposition as deposition Exhibit No. 2.

The Court: It may be received.

The Clerk: No. 48 in evidence. [216]

(The drawing referred to was marked Plaintiff's Exhibit No. 48 in evidence.)

Q. (By Mr. Freeman): I have just handed you a photostat marked Plaintiff's Exhibit No. 48, of the Amon deposition Exhibit 2, and will ask you if the drawing there or the cut there is the same you have just referred to in connection with Plaintiff's Exhibit 47.

A. Yes, it is a copy of the same drawing.

Q. And, therefore, it was made under your over-all supervision and direction?

(Testimony of John N. Wolfram.)

A. That is correct.

Q. Now, will you proceed to describe the drawing, using the nomenclature or terminology that appears in longhand upon Plaintiff's Exhibit 48?

A. This drawing is of a tube coupling or fitting, such as we have been talking about, and includes a body, which is marked as a body. At the one end of the body is a beveled surface, against which the flare of a tube is engaged. The tube is so marked.

The body has screw threads adjacent the beveled end, and the nut has internal screw threads inter-engaged with the body threads.

Surrounding the tube is a part labeled "sleeve," and which has an inner chamfered end, which engages the outer face of the flare of the tube. The sleeve has an enlarged [217] head at this end and the head has a surface labeled "sleeve shoulder," which is engaged by a surface on the nut, which is labeled "nut shoulder."

The purpose of these shoulders is to provide engagement between the nut and the sleeve, so that as the nut is threaded onto the body, the nut shoulder will engage the sleeve shoulder and drive the sleeve against the flare of the tube and press the latter into sealing engagement with the beveled end of the body. [218]

Q. I note upon the drawing, Plaintiff's Exhibit 48, the term "Sleeve Head Angle," with an arrow thereon; is that the sleeve head angle that you were referring to in connection with the drawings that

(Testimony of John N. Wolfram.)

you yourself made earlier?

A. Yes, that is correct.

Q. Is this drawing that you have, Plaintiff's Exhibit 48, a rather accurate dimensional enlargement of a physical Parker fitting?

A. Yes, it is very accurate. The original drawing was made, I think it was ten times scale, and this is about five times scale. That is, the reproduction was one-half of the original, so that this drawing should be quite accurate.

Q. In other words, it was made a little more than illustrative, it was made as an accurate dimensional drawing?

A. That is correct.

Q. Now, will you take the drawing, Plaintiff's Exhibit 48, and also the drawing Plaintiff's Parker Patent 2,212,183, Plaintiff's Exhibit 1, and compare the various parts, the sleeve head angle and the other terminology appearing on Plaintiff's Exhibit 48?

A. On Exhibit 48 we have the part labeled "Body" and this body coincides with the part given the numeral 5 as shown in Figure 1 of the patent.

The part which is labeled "Tube" in Exhibit 48 coincides [219] with the part designated by the numeral 8 in Figure 1 of the Parker patent.

The portion of the tube designated by the lead line leading from the word "Flare" in Exhibit 48 coincides with the flared tube portion 9 of the Parker patent.

The part labeled "Nut" in Exhibit 48 coincides

(Testimony of John N. Wolfram.)

with the part designated by the numeral 12 in Figure 1 of the patent.

The part labeled "Sleeve" in Exhibit 48 coincides with the part designated by the numeral 16 in the Parker patent.

The surface of the sleeve head indicated by the lead line from the words "Sleeve Head Angle" in Exhibit 48 coincides with the surface 21 as it appears in the Parker patent.

The surface of the sleeve, which is labeled "Sleeve Angle" in Exhibit 48, coincides with the surface labeled 18 in the Parker patent.

The surfaces labeled "Sleeve Shoulder and Nut Shoulder" in Exhibit 48 correspond with the surfaces adjacent the lead lines from the numerals 20 and 15 in the Parker patent.

Mr. Freeman: I want to offer in evidence the physical specimen of No. 8 Parker fitting as Plaintiff's Exhibit No. 45.

The Court: It may be received. Didn't you introduce that one?

Mr. Freeman: It was not yet offered. I just want to be safe, your Honor. [220]

(The device, heretofore marked Plaintiff's Exhibit 45, for identification, was received in evidence.)

Mr. Freeman: I want to offer as Plaintiff's Exhibit No. 46 the size No. 8 fitting of Parker with the section cut out.

The Court: It may be received.

(Testimony of John N. Wolfram.)

(The device, heretofore marked Plaintiff's Exhibit 46, for identification, was received in evidence.)

Mr. Freeman: And as Plaintiff's Exhibit No. 47 the black and white drawing corresponding in outline to the drawing of Plaintiff's Exhibit No. 48.

The Court: It may be received.

(The drawing, heretofore marked Plaintiff's Exhibit 47, for identification, was received in evidence.)

Mr. Freeman: I am just going to get over into the defendants' units.

The Court: Maybe we had better wait and not worry the defendant over night.

Mr. Freeman: I told the defendant we might have spoiled their Saturday afternoon and Sunday.

The Court: It is 4:00 o'clock, and I think it is about time that we recess. We will recess now until 10:00 o'clock tomorrow morning.

(Whereupon, at 4:00 o'clock p.m., Thursday, June 15, 1950, an adjournment was taken to 10:00 o'clock a.m., Friday, June 16, [221] 1950.)

Friday, June 16, 1950, 10:00 A.M.

The Clerk: The Parker Appliance Company vs. Irvin W. Masters and Joseph C. Collins, further trial.

Mr. Freeman: Will you mark this for identification, please?

The Clerk: No. 49 for identification.

(The drawing referred to was marked Plaintiff's Exhibit No. 49 for identification.)

Mr. Freeman: Mr. Wolfram.

JOHN N. WOLFRAM

the witness on the stand at the time of adjournment, having been previously duly sworn, resumed the stand and testified as follows:

Direct Examination

(Continued)

By Mr. Freeman:

Q. I hand you a drawing marked Plaintiff's Exhibit 49 and will ask you to explain what it is.

A. Exhibit 49 is a photostatic copy of Fig. 2 of the Parker patent 2,212,183, except with the reference numerals removed.

Q. Now, will you proceed with that drawing and point out the portion of the sleeve head which has what we might call the greatest amount of expansion, the part that has little or no expansion, or, as [223] the patentee says, limited expansion, and then the portion that should have no expansion?

I am going to ask you to take the drawing and divide it into three zones.

A. The portion of the sleeve——

Q. First, I am wondering if you will draw the

(Testimony of John N. Wolfram.)

three lines or draw the lines that bring about the three zones. A. (Witness complying.)

Q. Now, will you please conform the judge's copy just as you have indicated on Plaintiff's Exhibit 49 for identification?

A. (Witness complying.)

Q. Now, will you tell us what you have illustrated on the drawing, Plaintiff's Exhibit 49 for identification, and point out wherein the patent is applicable to the three zones which you have marked A, B, and C?

A. I have drawn three horizontal lines across the sleeve and have labeled the portions of the sleeve that are divided off by these three lines as zones A, B, and C.

Zone C is the portion of the sleeve head which undergoes the greatest amount of expansion because of the pivoted movement which I discussed yesterday.

In the Parker patent 2,212,183, on page 2, column 1, beginning with line 43, it is stated:

“In other words, the inner flare surface [224] of the sleeve will yieldingly clamp the flared tube end.”

This indicates that the portion of the sleeve which engages the flare of the tube yields and will yieldingly clamp the flared tube end. This is the portion which I have indicated as zone C.

Also in the patent in column 2, beginning with line 14, it is stated:

(Testimony of John N. Wolfram.)

“It will be observed by reference to these figures that during the assembly of the coupling the nose 19 alone first contacts the outer surface 11 of the tube flare, and upon continued application of end thrust by the screwing on of the member 12 and engagement of the clamping shoulders 15 and 20, the head 17 will be spread or displaced radially outwardly to store gripping tension in said head and move forwardly along the flared end of the tube to cause the clamping surfaces 11, 18 and 7, 10 to tightly contact throughout the whole of their respective areas.”

This description again refers to the yielding or expansion of the lower end of the sleeve, which I have marked in Exhibit 49 as zone C, to store up the hoop or gripping tension.

Q. I think you said column 2. You mean page 2 of the patent? [225]

A. I am sorry. It is page 2, column 1.

On Exhibit 49, there is another section of the sleeve head. It is the section at the upper end of the head, which I have labeled as zone B. In the Parker patent, on page 2, column 1, it is stated, beginning with line 43:

“In other words, the inner flare surface of the sleeve will yieldingly clamp the flared tube end while unlimited expansion of that portion of the head adjacent the clamping shoulder will be prevented.”

The last portion of this statement indicates that

(Testimony of John N. Wolfram.)

this upper portion of the sleeve head, which I have marked off as zone B, undergoes only a limited amount of expansion. Expansion is desired in the lower end of the sleeve in the zone marked C, since that is the portion which engages the flare of the tube. Expansion is not particularly desired or necessary in the zone marked B and means are provided in the coupling for preventing unlimited expansion of the zone as mentioned in the patent. [226]

On Plaintiff's Exhibit No. 49 I have also labeled a portion of the sleeve as zone A. It is not desirable to have expansion in this zone.

I do not at the moment find a specific reference in the patent to this particular portion of the sleeve, but it is obvious from engineering considerations that expansion is not particularly desired in this zone, and the coupling is constructed in such a manner that expansion does not occur.

Q. So that expansion that is desired is within the area that you have marked zone C?

A. That is correct.

Q. And that zone includes the inclined inner surface of the sleeve?

A. That is correct.

Q. And, likewise, that zone includes the portion between the sleeve head and the inner wall of the nut that is greatest in area?

A. That is correct.

Q. And with respect to zone B that includes the shoulder-to-shoulder contact between the sleeve head and the nut?

A. That is correct.

Q. And in that zone B, the outer wall of the

(Testimony of John N. Wolfram.)

sleeve is in closer communication or approaches more closely the inner wall of the nut? [227]

A. That is correct.

Q. And above the zone B that portion of the sleeve which is not included as part of the head proper encompasses or surrounds the tube to be coupled?

A. That is correct, it closely fits the tube.

Q. And that portion of the sleeve which is in zone A, that is, the inner wall which encompasses the tube, likewise continues on down and stands against the tube close to the heel of the flare, that is, the portion of the flare which connects to the tube proper?

A. That is correct.

Q. And the inclined surface of the sleeve extends from that straight line or straight wall connection for engagement with the outer wall of the flare of the tube?

A. That is correct.

Q. Does the Parker patent, following your explanation of zones C and B, tell why it is desirable to have the parts so proportioned and arranged and the result attained thereby?

A. Yes. On page 2, column 1, beginning with line 48, it is stated:

“With the coupling parts proportioned and arranged as herein described, remarkably better results in the way of efficient clamping are obtained than have been obtainable heretofore. Wider seating areas are provided, all danger of the [228] inner sleeve head sticking in the outer

(Testimony of John N. Wolfram.)

sleeve or nut is avoided, and a measure of spring tension is stored in the sleeve head 17 by the spreading thereof which is found to be very effective in aiding retention of the desired clamped relation of the tube flare surfaces and the surfaces which they engage.”

Q. And Plaintiff’s Exhibit 49, I think you stated, was a photostatic copy of Figure 2 of the patent drawings with reference numerals omitted?

A. That is correct.

Mr. Freeman: I want to offer as Plaintiff’s Exhibit 49 the photostat referred to by the witness in connection with his testimony having to do with zones C, B, and A.

The Court: It may be received.

(The drawing, heretofore marked Plaintiff’s Exhibit 49, for identification, was received in evidence.)

The Court: I wonder if I could ask counsel a question.

Mr. Freeman: Yes.

The Court: Assuming that that was in the public domain—I say “assuming,” I don’t know whether it was or not—the beveled part of the body that engages with the flare of the tube; and assuming, also, that tubes had been flared, and that is in the public domain; assuming also that the use of a sleeve was in the public domain; then, in reality, the [229] thing that you actually claim is the fact that using all these things in the public domain a remarkably

(Testimony of John N. Wolfram.)

better result in the way of efficient clamping is obtained, is that correct?

Mr. Freeman: No, that is not quite correct.

The Court: Maybe I had better ask opposing counsel.

Mr. Huebner: Your Honor is absolutely right, as far as we are concerned, and that is what we eventually expect to demonstrate. Not that he obtains any better result, but that his whole patent is predicated on a claim that it does, and it has no foundation.

The Court: Now, let me ask you a question. You have injected yourself in this argument. Assuming that everything I have said is correct, and assuming that they have combined these things that are in the public domain, and as a result of the combination have devised a more efficient way, a way of obtaining better results in the coupling, are they entitled to a patent?

Mr. Huebner: No. If they have taken—may I take it in steps? If a patentee has taken an element here, and an element there, and another element somewhere else, and assembled them in a new way, or has improved their form so that they achieve as a unit or combination a new and unexpected result, and in doing so has exercised more than engineering skill or the skill of the art, then he may be entitled to the patent. But if he takes all these old parts and puts [230] them together and merely utilizes the information that is already known to the trade, and exercises nothing more than engineering skill or the skill of a designer, then he is not entitled to a

(Testimony of John N. Wolfram.)

patent and it should be declared invalid for want of invention.

The Court: Now, let me ask you, supposing that this beveled surface of the body is in the public domain, that is, the beveling of it, not the angle, but the beveling of it; supposing the flare of the tubing is in the public domain, that is, the flare, not the angle; supposing the use of the sleeve is in the public domain, and that the sleeve is used, but not the angle of the head of the sleeve; now, the Parker people by taking these three things that are in the public domain——

Mr. Huebner: And the nut, too?

The Court (Continuing): ——and the nut. ——changed the bevel upon the top of the body and changed the bevel upon the tube, changed the angle upon the sleeve, and by making those changes they have used things that were fundamentally in the public domain, but they have changed it by some experimentation.

Mr. Huebner: You are assuming they have changed the exact dimensions or shape?

The Court: Yes, by experimentation or by engineering facilities or intuition. And as a consequence they have [231] produced a coupling that is much more efficient than former couplings, are they then entitled to a patent?

Mr. Huebner: No, they are not, unless what they have done goes beyond engineering skill. If given the information which your Honor has presumed is known to the art, and the witness has even acknowl-

(Testimony of John N. Wolfram.)

edged that these types of fittings generally were old, given these parts and given their relationship, he is not entitled to a patent or to have his patent sustained unless in the opinion of the court those engineering details or changes that have been made couldn't have been made by any ordinary man skilled in this art if given the problem to make a tight fitting. [232]

The Court: Now, any engineer of any—shall I say extraordinary ability or just more than average ability—more than average ability, when he sees something done, can duplicate it.

Mr. Huebner: That is right.

The Court: In other words, if he sees it done, it is easy to go and say, "I could have done that." But it takes something beyond the ordinary to first conceive. The Japanese are very grand——

Mr. Huebner: Copyists.

The Court: Copyists. They can take anything and copy it. They can follow it. But they can't conceive, they can't initiate.

Mr. Huebner: As far as you have gone, your Honor, but there are more facts we will unfold, but as far as you have gone in your statement of assumed facts, then it becomes a judicial function to consider whether what the man did, what Mr. Parker did, involved more than what a good engineer would do if given a problem to supply a fitting to the customer's wanting.

The Court: Well, Mr. Freeman, I didn't want to take the ball away from you. Now I will come

(Testimony of John N. Wolfram.)

back to you. Assuming that the only thing that Parker has done in this particular case is to change the angle of the bevel upon the body and upon the tube, change the angle of the sleeve—— [233]

Mr. Freeman: That is the outside angle. Let's call that the outside wall angle.

The Court: All right, the outside wall angle. Taking these things, the bevel on the body was known, the flaring of the tubing was known, the use of the sleeve was known, but you have changed the way they went together, either by intuition or by engineering skill, and as a result, you have been able to produce a much more efficient coupling. Are you entitled to a patent?

Mr. Freeman: If your Honor will recall, in my opening statement I told your Honor that the use of the nut, the sleeve, the flared tube, and the body member, were old. That is rather well illustrated in one of Parker's own patents. That is the patent that is referred to in the first paragraph of the patent in suit, that is the 1893 patent, which has now expired. I told your Honor, in answer to a question propounded to me by defendants' counsel, that as far as that patent was concerned, we would never assert it against them, we haven't asserted it against them, and they are as free as all outdoors to make that kind of device. But they don't want to make that kind of a device. They want to make one that does include an outside angle, and that does give us what this witness has just referred to as zones A, B, and C.

If they don't want to make zone C, they want

(Testimony of John N. Wolfram.)

to make one like the 1893 Parker patent, which is the one that the [234] Army and Navy and commercial aircraft people used until Parker came along and made it possible to make the kind of a fitting we have here, if they don't want to make the kind that is in the public domain, they can copy the 1893 Parker patent, and we say amen to them.

The next thing, will the commercial aircraft people fly or buy, first, fittings of that kind and use them on their planes when they can buy the fitting that is now made by the defendants, is now made by the plaintiff, and use those fittings with the added degree of safety?

The Court: You haven't answered my question. You have given me a good argument.

Mr. Freeman: I did not mean to argue, your Honor, because now is not the time to argue.

The Court: That's right.

Mr. Freeman: I have endeavored to answer your question.

The Court: I am trying to get the philosophy. The fact of the matter is, if I understand your statement, really the thing here in controversy is the sleeve and the angle.

Mr. Freeman: On the outside of the sleeve.

The Court: On the outside of the sleeve.

Mr. Freeman: Right.

The Court: And because you have devised this particular angle and, of course, with the eye, you can't tell it is an angle—— [235]

(Testimony of John N. Wolfram.)

Mr. Freeman: It is hard to see, but they will admit there is an angle on it.

The Court: Because you have devised this angle, you think you are entitled to the patent.

Mr. Freeman: Yes, sir.

The Court: In other words, this is really the lawsuit here (indicating).

Mr. Freeman: Right.

The Court: Where the witness has just testified.

Mr. Freeman: That is right; yes, that is right, your Honor.

The Court: That is all I want to know.

Mr. Freeman: That is exactly correct.

The Court: That is all I want to know about that.

Mr. Huebner: He still didn't answer your Honor's question, because you had in it the comparison between engineering skill or invention, and we probably could get together on the law. If your Honor decides only engineering skill or the skill of the art is involved, then there is no invention. As a statement of law, I would suggest Mr. Freeman say **yes or no**.

The Court: Let's assume this, that we take the sleeve here and the outside collar of the sleeve was straight, perpendicular, always been used that way. It gave a coupling, but it was not entirely satisfactory. Nobody knew what the [236] trouble was. They experimented. Finally, the Parker people determined to try a certain angle, and it worked. That's all they did, is to change the outside collar of the sleeve.

(Testimony of John N. Wolfram.)

Mr. Huebner: From a straight one to an angle.

The Court: From a straight one to an angle. Aren't they entitled to a patent?

Mr. Huebner: If there was that problem, and if the others had it, and if this was a sudden flash of inspiration or genius, that instead of making it straight, you made an angle and you got a wonderful new result, then they might be entitled to a patent. But airplanes are flying today. Constellations are flying today without this patent. There wasn't any real problem. There wasn't any flash of genius. It was just an engineering idea put on there in order to go through the Patent Office and get a patent.

The Court: Supposing that they had this straight, no curve at all. They tried to make the circumference at the bottom larger than at the top. It didn't work. They tried to make it smaller at the bottom than the top. It didn't work. They experimented with different angles to see whether or not one particular angle would work better than another angle, and they finally came upon this particular angle. Experimentation, tried and rejected it, tried and rejected it, and they finally came upon this particular angle. Assuming, also, which you may not be willing to admit, but I think the [237] evidence so far indicates, that this particular angle gives a better connection, gives a better coupling, it is more desirable. Aren't they entitled to the patent?

Mr. Huebner: Your Honor, there is a fallacy

(Testimony of John N. Wolfram.)

in the very premise of this assumption that this particular angle, and I use that in quotes, has not been established. We don't know yet what this particular angle is. It is not given in the patent.

There is no degree whatever specified in the patent. It is left entirely up in the air. So I don't know.

The Court: Well, you have got the prints, haven't you?

Mr. Huebner: Not from the patent.

The Court: You got them from Mr. Parker.

Mr. Huebner: We got prints from—perhaps we got some prints from Mr. Parker, but they were government approved prints and they specified an angle, but that angle didn't come out of the patent.

The Court: Let me ask you this. The contract that your clients got from the government specified a certain particular angle on the collar of the sleeve?

Mr. Huebner: In effect, yes, because the government said, "We want these made according to the dimensions shown on these AN sheets.

The Court: And they got those from [238] Parker?

Mr. Huebner: Some of them may have come from Parker. Some of them may have come from the government. They came from different places.

The Court: Well, this is the lawsuit.

Mr. Huebner: That is part of it, surely.

The Court: I mean as far as the patent is concerned.

(Testimony of John N. Wolfram.)

Mr. Huebner: That is one of the most important parts of the lawsuit, and what we will show, among other things, is that the patent does not teach what they claim is now the invention. You can't say in a patent, "I use an angle and I claim an angle so shaped that," and sustain it. That is not in such clear, concise and exact terms as to enable anyone skilled in the art to practice it.

The Court: Suppose they had said, "I claim an angle of 2 per cent"?

Mr. Huebner: If that involved invention, that would be specific. Two degrees perhaps you mean.

The Court: All right, two degrees.

Mr. Huebner: If an angle of two degrees of a circle was something that they found suddenly or by experiment, and nobody had ever thought of it before, and they did the job, and they said so in the patent, in their claims, then they might be entitled to sustain it, but when they leave their patent wholly void of reference to what the angle should be, so that they can catch people coming and going if their patent [239] is held up, then they are not entitled to be sustained.

The Court: You never filed a patent to catch people coming and going yourself?

Mr. Huebner: Yes, surely, your Honor.

Mr. Freeman: All they have to do is make that wall straight and that would end the lawsuit. They don't want to do that. They could follow the earlier patent.

The Court: Well, now, wait a minute. Let's see

(Testimony of John N. Wolfram.)

whether you are not taking in too much territory. Couldn't they make that wall there at an angle other than the angle that you make it?

Mr. Freeman: No. The patent doesn't say the specific angle, your Honor. The patent says it is at an angle.

The Court: Can I ask counsel this: Can it be stipulated, can it be agreed to between counsel that up until the time of this patent, nobody claimed an angle of any kind or used an angle of any kind? You don't have to bind yourselves on this, if you don't want to.

Mr. Huebner: I think there was a reference, your Honor, and I don't want to misrepresent to the court without checking back on it.

The Court: If you can find in some expired patent or some patent that is in the public domain a reference to the angle, it might clarify the situation, or if we can agree that the Parker patent is the first one that said anything about the [240] angle, that will clarify the situation.

Mr. Huebner: I am afraid, your Honor, we are not at liberty to so stipulate because my recollection is there was something.

The Court: I don't want you to stipulate anything that is going to be detrimental to you or your clients.

Mr. Huebner: May we leave that open?

The Court: We will leave that open. But, however, I wish you would investigate over the week-end and come back here on Monday and tell me

(Testimony of John N. Wolfram.)

whether or not you can find a patent that is in the public domain that says anything about this angle.

Mr. Huebner: All right. We will check our notes and our files.

The Court: Fine. I have been looking for the lawsuit, I think I have found part of it now.

Mr. Freeman: Primarily, the lawsuit, your Honor, is in the three claims of the patent. I don't want to argue the case, because there is a proper time for that. I do want to say that the prior Parker patent shows a straight wall outside on the sleeve.

The Court: Can you tell me this from your own knowledge, from the investigation you have made in this case. Have you ever found a patent that is in the public domain that ever claimed an angle in the collar of the sleeve? [241]

Mr. Freeman: If we found anything that had these three zones in it, that is, just brought about by the angle on the sleeve and by the closeness between the upper portion of the sleeve and the outside of the nut, we would not have been in court.

The Court: Now you are talking to me about the results obtained when you talk about the three zones.

Mr. Freeman: No, I am not, your Honor. When you take and make a change in the angle of the sleeve, you do more than just that. You then bring about a cooperative relationship that gives you the widest possible seat or contact between the shoulder of the sleeve and the shoulder of the nut, so

(Testimony of John N. Wolfram.)

that you can confine the overall area of the [242] fitting.

The Court: Yes, I know, but you haven't answered my question. Is there any patent that you know of in the public domain——

Mr. Freeman: The answer is no.

The Court: ——that says anything about the angle in the collar of a sleeve?

Mr. Freeman: The answer is no.

The Court: Very well. Excuse me for breaking in, Mr. Freeman.

Mr. Freeman: Will you mark this Exhibit 50, please?

(The chart referred to was marked Plaintiff's Exhibit 50, for identification.)

Q. (By Mr. Freeman): I have handed you a chart marked for identification as Plaintiff's Exhibit No. 50. Will you please tell us, first, the make-up of Figures 1, 2 and 3 there shown?

A. The three figures are a photostat of the three figures of the drawing with the reference numerals of the patent removed, and with other reference numerals substituted.

Q. So that your statement is accurate, the photostat is somewhat enlarged, the figure is somewhat enlarged? A. Yes, I believe it is.

Q. I note certain reference characters in a circle on Figures 1, 2 and 3; will you please explain what they refer to? [243]

A. The reference numerals which are on the Fig-

(Testimony of John N. Wolfram.)

ures 1, 2 and 3 coincide to or with elements referred to in the written material which is a part of the photostat and which represents the wording of claim 1 of the patent.

Q. Now, will you tell us just what is referred to, that is, connect up claim 1 and the wording that you have there, together with the indicating numbers, along with the indicating numbers on Figures 1, 2 and 3?

Mr. Huebner: Your Honor, I want to interpose a formal objection simply to protect our own position. Ordinarily, or, let me say, in a good many patent cases courts do not permit expert witnesses to discuss the claims and the language of the claims as applied to the patent disclosure or to the alleged infringing device. Some courts do. I interpose the objection that what the witness may say is within the province of the court, so that I will not be confronted later with an objection on the part of counsel to questions that I may want to ask.

The Court: Your objection is overruled. I think this witness can explain the claims by this diagram a great deal better than I can by reading the claims. I have read the claims and I still don't understand them.

Mr. Huebner: Then I will have the same privilege, I assume, in cross-examination and with our witnesses?

The Court: Absolutely. [244]

Q. (By Mr. Freeman): Proceed.

A. The claim starts off with the words "In a

(Testimony of John N. Wolfram.)

coupling for," then we have the numeral 1 in a circle. The numeral 1 has been interposed at this point to refer to the expression which follows it, namely,

"tubes having the," or more simply "tubes."

You will note that in the figure the numeral 1 shows a lead line to the tube, thus the numeral indicates the tube in both the figures and in the description.

The claim then goes on to state:

"tubes having the ends thereof flared,"

and here before the word "ends" the numeral "2" indicates the end or flared end of the tube, and it will be noted that in the figures the numeral also indicates the flared end of the tube.

The claim then goes on with the numerals 3, 4:

"coupling members having threaded engagement with each other,"

3 and 4 then referring to the coupling members, 3 being the body as shown in Figure 1 and 4 being the nut.

The claim goes on with the numeral 3, then:

"one of said coupling members having a 5 seat associated therewith adapted to engage the 6 inner face of the 2 flared end of the 1 [245] tube"

In this part of the claim the numeral 5 represents the seat on the body as shown in Figure 2; the numeral 6 indicates the inner face of the flared end of the tube.

The claim goes on further to state that:

(Testimony of John N. Wolfram.)

“and the other coupling member having a clamping shoulder,”

The other coupling member is the part 4 as shown in the drawings, and the clamping shoulder is designated by the numeral 7, and can be seen in Figure 2.

The claim further goes on:

“a sleeve surrounding said tube and having a solid head”

8 indicates the sleeve, as shown in Figure 1, and 9 indicates the solid head as indicated in Figure 1.

The claim further goes on:

“provided with a shoulder against which the clamping shoulder of the coupling member engages,”

The numeral 10 indicates the shoulder of the sleeve, and the numeral 7 is the shoulder on the nut as shown in the drawings.

The claim goes on:

“said head having the inner surface thereof provided with a coniform flare so shaped that the initial contact of the head with the [246] flared end of the tube is at the free end of the head”

Now, the inner surface 11 referred to in the claim is the inner surface of the sleeve itself, as clearly indicated in Figure 2. This part of the claim states that this inner surface of the sleeve is coniform and so shaped that the initial contact of the head, meaning the head of the sleeve, with the flared end

(Testimony of John N. Wolfram.)

of the tube, is at the free end of the head of the sleeve.

In my testimony yesterday I pointed out that the patent indicates that the free end of the head is the lower end of the sleeve head as viewed in the drawings.

The claim goes on to state:

“and adjacent the outer end of the flared end of the tube,”

This refers to the point of contact or initial contact to which we have just referred.

The claim then goes on:

“whereby during the clamping action said head will be expanded and moved forward along the flared end of the tube into intimate contact with the outer surface thereof throughout substantially the entire extent of the flared surface on the sleeve head.”

This part of the claim states that the sleeve head expands and moves forwardly, which means that it moves downwardly as [247] viewed in the drawings along the flared end of the tube, until the inner flared surface 11 of the sleeve is in full contact with the flare, rather than just the initial toe contact.

Mr. Freeman: I think yesterday I forgot to offer among the drawings which collectively comprised Exhibit 28 the first one, which is 28-A.

The Court: It may be received.

(The document referred to was marked

(Testimony of John N. Wolfram.)

Plaintiff's Exhibit 28-A, and was received in evidence.)

Mr. Freeman: Will you mark this, please?

(The document referred to was marked Plaintiff's Exhibit 51, for identification.)

Q. (By Mr. Freeman): I hand you a drawing or chart which has been marked Plaintiff's Exhibit 51 for identification, which specifies claim 2. Will you please describe the application of claim 2 to the drawings illustrated on the chart?

A. This drawing is also a photostat of the patent drawings somewhat enlarged and with different reference numerals substituted. Claim 2 is attached and copied from the patent.

The claim states:

"In a coupling for tubes"

1 being the reference numeral for tubes, again, and 1 appearing [248] in the drawings.

"having the end thereof flared,"

2 indicating the flared end of the tube.

"coupling members having threaded engagement with each other,"

3 being the body coupling member, and 4 being the nut coupling member. [249]

"one of said coupling members having a seat associated therewith for engaging the inner flare of the flared end of the tube . . ."

5 indicates the seat or beveled surface of the body. 6 indicates the inner surface of the flare of the tube. The claim then continues:

(Testimony of John N. Wolfram.)

“ . . . and the other coupling member . . . ”
meaning the nut 4.

“ . . . having a clamping shoulder and an inner wall.”

The clamping shoulder is shown at 7 and the inner wall is shown at 8. The claim then goes on:

“ a sleeve surrounding said tube and having a solid head capable of radial expansion during the clamping action,”

9 indicates the sleeve and 10 is the head portion, and it is this head portion which it is stated as being capable of radial expansion during the clamping action. The clamping action is the time when the wrench is applied to the nut to bring it to a tight position. The claim then goes on:

“said head being provided with a clamping shoulder against which the shoulder of the coupling member engages”

The head is the head of the sleeve and it is referred to by the numeral 10, and the clamping shoulder is indicated by the [250] numeral 11 and is the clamping shoulder of the sleeve, and is engaged by the clamping shoulder 7 of the nut. The claim then goes on:

“and an inner flare surface for engaging the outer flared end of the tube,”

referring back, this part that I have just quoted, is still a part of the sleeve head. 12 is the number which indicates the inner surface of the flared part of the sleeve head, and it engages the outer surface of the tube flare. The claim then goes on:

(Testimony of John N. Wolfram.)

“said clamping shoulder being spaced a distance back of the inner flare surface.”

The clamping shoulder referred to is that on the sleeve as indicated by the numeral 11, and it is stated that this shoulder is spaced a distance back of the inner flare surface 12 of the sleeve head. The claim then goes on:

“the outer surface of said head and the said inner wall of the coupling member”

We are now referring to the outer surface 13 of the sleeve head and the inner wall 8 of the nut.

“being so shaped relative to each other that when the sleeve head expands during the clamping action, they will contact only in the region of the clamping shoulder.”

That refers to the clamping shoulder 11 of the sleeve head. [251]

“the remaining portion of the head being free from contact with the coupling member”

or nut 4

“whereby the clamping force of the head against the tube is determined by the spring tension of the metal forming said head.”

This indicates that the free end of the head, which we have already said was the lower end of the sleeve head as viewed in the drawings, is so shaped that it is free from contact with the side wall of the nut, so that the clamping pressure applied by the head of the sleeve to the flare is determined by the hoop tension or spring tension with which the head becomes loaded as it expands.

(Testimony of John N. Wolfram.)

The Court: I think before we proceed further, we will take the morning recess. We will recess until 15 minutes after 11:00.

(Recess.)

Mr. Freeman: I am going to offer in evidence as Plaintiff's Exhibit 51 the photostat of the patent drawings and claim 2 of the patent just referred to by the witness.

The Court: It may be received.

(The document referred to was received in evidence and marked Plaintiff's Exhibit No. 51.)

The Court: Did you offer in evidence Exhibit No. 50?

Mr. Huebner: No, he didn't. [252]

The Court: I don't think you did, either.

Mr. Freeman: I will also offer as Plaintiff's Exhibit 50 the chart of claim 1 and the photostat of the patent drawing referred to by the witness.

The Court: It may be received.

(The exhibit referred to was received in evidence and marked Plaintiff's Exhibit No. 50.)

Mr. Freeman: I will ask that this be marked as Plaintiff's Exhibit 52 for identification.

The Clerk: No. 52 for identification.

(The document referred to was marked Plaintiff's Exhibit No. 52 for identification.)

(Testimony of John N. Wolfram.)

Q. (By Mr. Freeman): I hand you a chart marked Plaintiff's Exhibit 52 for identification, which has reference to claim 3 of the Parker patent, and will ask you to describe it substantially as you did with respect to Plaintiff's Exhibits 50 and 51.

A. This again is a photostat somewhat enlarged of the figures of the patent drawing with different reference numerals substituted and with the wording of the claim 3 attached. The claim states:

“In a coupling for tubes”

1 being the tube

“having the ends thereof flared”

2 again is the flared end of the tube.

“coupling members having threaded engagements [253] with each other”

3 being the body member and 4 being the nut.

“one of said coupling members having a seat associated therewith”

The coupling member referred to is the body 3 and the seat of the beveled portion 5.

“adapted to engage the inner face of the flared end of the tube”

The inner face of the flared end of the tube is indicated by the number 6. The claim then goes on:

“and the other coupling member having a clamping shoulder,”

The other coupling member referred to is the nut 4 and the clamping shoulder is indicated by the numeral 7. The claim then goes on:

“a sleeve surrounding said tube and having a solid head provided with a shoulder against

(Testimony of John N. Wolfram.)

which the clamping shoulder of the coupling member engages,”

The sleeve is indicated by the number 8 and it has a solid head indicated by the number 9 and 10 indicates the shoulder of the sleeve head, and 7 again indicates the clamping shoulder of the nut 4. [254]

The claim goes on:

“said head having the inner surface thereof provided with a coniform flare so shaped that the initial contact of the head with the flared end of the tube is at the free end of the head and adjacent the outer end of the flared end of the tube,”

The head of the sleeve referred to is indicated by the number 9, and the inner surface of the head is indicated by the number 11, and it is this surface 11 which is provided with a coniform flare so shaped that the initial contact of the head of the sleeve is with the flared end of the tube at the free end or lower end of the head as viewed in the drawing, and adjacent the outer or, again, the lower end of the flared end of the tube as viewed in the drawing.

The claim then goes on:

“the outer surface of said head”

The outer surface is indicated by the number 12, and it is the outer surface of the sleeve head 9.

“and said inner wall of the coupling member being so shaped relative to each other that when the sleeve head expands during the clamping action, the portion of said head contacting with the flared end of the tube is at all times out

(Testimony of John N. Wolfram.)

of contact with the coupling member [255] whereby the clamping face of the head against the tube end is determined by the spring tension of the metal forming said head."

In the third last line of the claim, I believe that is an error, that the word "face" following the word "clamping," should be the word "force."

This portion of the claim indicates that the inner wall 13 of the nut, and the outer surface 12 of the sleeve head, are so shaped relative to each other that when the sleeve head expands during the clamping action the portion of the head contacting with the flared end of the tube, which is the lower portion of the sleeve head, or that portion which we identified in another drawing as zone C, is at all times out of contact with the coupling member 4, which is the nut, whereby the clamping force of the sleeve head against the tube is determined by the spring or hoop tension of the metal in the head of the sleeve.

Mr. Freeman: I offer in evidence as Plaintiff's Exhibit 52 the claim chart of claim 3 of the Parker patent.

The Court: It will be received.

(The chart, heretofore marked Plaintiff's Exhibit 52 for identification, was received in evidence.)

Mr. Freeman: Will you mark this, please?

(The document referred to was marked Plaintiff's Exhibit 53, for identification.) [256]

(Testimony of John N. Wolfram.)

Q. (By Mr. Freeman): I hand you a chart marked for identification Plaintiff's Exhibit 53, and will ask you to take the drawing portion thereof and compare it with Plaintiff's Exhibit 6.

Mr. Huebner: Your Honor, I object to that on the ground there is no foundation laid. The question assumes a fact not in evidence, that this drawing here is a true drawing of the accused Masters fitting. It is mistitled, which is not the primary point. It may be an assembly of parts of the type made by Masters, but the important thing is that there is no tie-up, as a foundation for this question, showing that this is a drawing made in accordance with the government specifications.

Mr. Freeman: You didn't, apparently, understand my question. I asked him to compare it with a Masters fitting, which I handed him, which is a fitting that Mr. Masters gave me, and which is in evidence as Plaintiff's Exhibit No. 6.

The Court: Overruled.

The Witness: The drawing which I have, which is entitled "Masters' Fitting With Double Angle Sleeve," is an enlarged scale drawing corresponding to the physical exhibit, Plaintiff's Exhibit No. 6.

The Court: Now may I ask, Mr. Freeman, if Plaintiff's Exhibit 6, which you claim to be a Masters fitting, did you get the exact fitting in toto from Masters, or did you get [257] the parts?

Mr. Freeman: It was just handed to me—we asked for them—in response to an inquiry. And they were handed to me collectively.

(Testimony of John N. Wolfram.)

The Court: They weren't handed to you piece-meal?

Mr. Freeman: No. I got complete fittings, and the fittings were then assembled. They were handed to me, three of them were tagged. I asked for three of each. They were handed to me. They were connected together. We put a tag through them. They were so marked. And we have cut up some of them, we have measured up some of them.

The Court: Were they handed to you during the deposition in this case?

Mr. Freeman: Yes.

The Court: During the deposition?

Mr. Freeman: Yes.

The Court: Is there a question pending?

(The last answer was read by the reporter.)

The Court: Proceed.

Q. (By Mr. Freeman): Will you please apply claim 1 of the Parker patent to the drawing forming a part of Plaintiff's Exhibit 53? [258]

Mr. Huebner: I still say, your Honor, he hasn't laid enough foundation to demonstrate that this is an accurate drawing of that fitting, if you want to call it a fitting, or assembly of a fitting.

The Court: I think possibly he hasn't laid the foundation that this is a drawing of Exhibit 6. The objection is sustained. I think he can lay a foundation.

Q. (By Mr. Freeman): Will you tell me about the makeup of the drawing forming a part of Plaintiff's Exhibit 53? What does it represent?

(Testimony of John N. Wolfram.)

A. Exhibit 53 is a drawing made under my direction in accordance with the specification sheets which are published by the government and which this fitting, Plaintiff's Exhibit 6, is an example of.

The Court: My understanding of the situation is that the defendants do not contend that they are not making these, at least the parts of the fitting, exactly like the so-called Parker fitting. In other words, I assume from the stipulations entered into, that the parts of the fitting which is made by Masters are identical with the parts of the fitting as made by Parker and, consequently, I assume that the claims of the Parker fitting could apply exactly to the Masters fitting.

Am I wrong?

Mr. Huebner: That is wrong, your Honor. I will clarify [259] it. The parts made by Masters according to government specifications are presumably identical to the parts manufactured by Parker according to government specifications. So much is probably correct, and I think I so stipulated earlier. That, however, is a mere comparison between the commercial device of Parker and the commercial device of the defendant, and is not a test. The test is whether the commercial device of the defendants meets or fulfills the definition of the claims of the patent, and that we absolutely deny.

So he has the burden at this point—if that is where he is going to bring it in—of establishing that this drawing, and that we deny, that this drawing is correct. He has got to establish, if he can, that

(Testimony of John N. Wolfram.)

the drawing actually does represent the AN specification, the government specification, under which Masters manufactures the parts.

The Court: He testified he made this drawing or the drawing was made under his supervision from so-called Exhibit 6.

Mr. Huebner: So far, so good. Actually, however, there is an inaccuracy that he hasn't yet explained.

Mr. Freeman: You will have an opportunity to cross-examine this witness.

Mr. Huebner: Let's get it cleared up here. There is no tube on the physical exhibit. He has got a tube in the drawing. [260]

The Court: Let me see the physical exhibit.

Mr. Huebner: Masters doesn't supply tubes and never did. Neither does Collins.

The Court: It is true there is no tube on Exhibit 6.

Mr. Freeman: Well, is it your position you do not infringe because you do not supply the tube?

Mr. Huebner: Our position is we don't infringe because we don't meet the terms of the claims.

The Court: I understand that one of the issues here is that the coupling as made by Parker isn't the coupling that is described in the patent.

Mr. Huebner: That is right, it is not.

The Court: You don't deny you are making exactly the same sort of coupling Parker is making?

Mr. Huebner: So far as he makes them under the AN standard specification.

(Testimony of John N. Wolfram.)

The Court: And if Parker does not make the coupling as described in the patent and you make the same kind of coupling as Parker does, then there is no infringement?

Mr. Huebner: That is correct. That is our position.

The Court: I am going to have to sustain the objection upon the ground that the drawing is not a drawing of Exhibit 6, that you have inserted something into the drawing that is not in Exhibit 6.

Q. (By Mr. Freeman): I am going to ask you to compare [261] the drawing with Plaintiff's Exhibit 7, which is a cut-away section of the same physical structure which has been in evidence as Plaintiff's Exhibit 6, and will ask you to compare it with the drawing, Plaintiff's Exhibit 53.

The Court: Before he answers, I wonder if I could ask counsel a question. It is your contention that the fitting as made by Parker is not in accordance with the claims of the patent?

Mr. Huebner: Yes, your Honor.

The Court: Is the defect that you contend is not followed, the fact that the patent does not indicate the degree of slope in the collar of the sleeve?

Mr. Huebner: That is only part of it your Honor. That lack of disclosure goes more to our attack on the validity, rather than non-infringement. I will go into it in some detail, if you would like, at this time.

The Court: No. I am just trying to find out, if I can, the issues in the case. I understood at the begin-

(Testimony of John N. Wolfram.)

ning of this case you raised the question that the claims were not satisfactorily described, they are too general.

Mr. Huebner: That is one point. That goes to validity. We say it makes the patent invalid. Then we say even if you take the claims as they read and you get an accurate illustration or accurate description of the AN fitting which Masters make, you will then discover that their claims do not [262] read on this fitting and, therefore, we do not infringe the patent.

The Court: Well, now, let's assume that the court would hold—of course, this is only an assumption, because I think it is too early for the court to form any conclusion, but let's assume that the court would hold that the description in the patent is sufficient, that is, it is clear, all the elements are there, and the court believes it is sufficient. Now, under that assumption, would you say that the reason you say that the fitting that Parker makes is not the fitting that is described in the patent is because there is nothing in the patent relative to the degree of angle in the collar of the sleeve?

Mr. Huebner: That goes directly and expressly to the question of infringement. That lack of particularity in the claim probably doesn't apply to that particular defense of non-infringement.

The Court: The reason I am asking—

Mr. Huebner: There are other things in the claim, though. We haven't had our turn yet, but there are other things in the claims that we will

(Testimony of John N. Wolfram.)

explain as we get on with our case, which are absolutely not found in the AN fitting.

The Court: Well, the reason I am asking you that question is I think it has been stipulated that the bevel on the top of the body—that a bevel on the top of the body and a [263] flared——

Mr. Huebner: Flared tube.

The Court: ——flared tube, and the use of the collar is in the public domain.

Mr. Huebner: Yes, a collar and nut. I think even the nut was included.

The Court: In the public domain?

Mr. Huebner: In the public domain.

The Court: So the only thing, as far as I have been able to ascertain, that is not admitted to be in the public domain is the way the collar of the sleeve has been milled or manufactured at an angle or at a degree.

Mr. Huebner: I think there are two things counsel for the plaintiff hasn't yet admitted to be in the public domain. One is the relation on the inside of the sleeve to the outside of the sleeve. I think it is still his contention that it was new for him to so shape those parts that the inside of the sleeve hits first down on the toe and near the extreme end of the flare. That is one thing.

The other thing, I believe he still contends is new and is in the patent, is the relationship between the outside of the sleeve head and the inside of the nut, where he has an angle in there, so that, as the patent says, when you tighten it up, you can expand and

(Testimony of John N. Wolfram.)

still not touch the walls of the sleeve, I mean touch the walls of the nut down near the end [264] of the sleeve.

Among other things, in trying to answer your question, I would say this, that one of our points in connection with non-infringement is that irrespective of what angle is employed, according to the patent, the way it is manufactured according to government specifications, it doesn't respond to the action that is called for. [265]

The Court: Well, if I understand your position, now I probably don't, but if I understand your position, if the patent as set forth says that this angle was to be a certain specific degree, and if the government had specified that certain degree, and you had come along and made fittings with that degree, then there might be a question of an infringement of a patent?

Mr. Huebner: As to the claim which had that particularity in it we might be held to infringe, and we might then have to relegate our attack on other grounds.

The Court: And then you contend because there is nothing in the patent to indicate the degree of slope, that the patent doesn't tie up as far as the degree of slope with the requirement of the government?

Mr. Huebner: And is, therefore, fatally defective for ambiguity under Section 4888 of the Revised Statutes.

(Testimony of John N. Wolfram.)

The Court: I just wanted to get your position clear if I could.

There was a question before the witness.

Mr. Freeman: I will reframe it, your Honor.

Q. (By Mr. Freeman): We were directing your attention to Plaintiff's Exhibit 7, which is a similar fitting to Plaintiff's Exhibit 6, which does include a piece of pipe which is illustrative.

A. As I have said, Plaintiff's Exhibit No. 53 is a [266] drawing made under my direction from the government specifications known as the AN fitting, and I recognize Plaintiff's Exhibit 7 as a fitting made in accordance with the same specifications.

The Court: Do I understand that this drawing that you made was made according to government specifications and not a drawing made from Exhibit 7?

The Witness: That is correct.

The Court: Then you have entitled this a Masters fitting, but really what you mean is this is a drawing that you have prepared according to government specifications?

Mr. Freeman: Which is in accordance with the Masters fitting. Those fittings that we have here, there isn't any question, and I think the defendant will agree, that the fittings that they gave us were the AN fittings made in accordance with certain specifications.

Mr. Huebner: The parts we gave you were parts made according to the AN specifications, but we didn't furnish the tube, because we never furnished tubes, and the tube that is in Exhibit 7 wasn't fur-

(Testimony of John N. Wolfram.)

nished by us. We don't know, we have no knowledge of what tube eventually goes into the assembly.

The Court: You contend that you did not furnish to the plaintiff a completed fitting?

Mr. Huebner: Yes, we so say, because as a matter of [267] convenience we brought them all together there, and I wasn't present, but Mr. Beehler, who is in court, was, gave him the parts, he put them together. We never sell those assembled like that. We sell them in boxes where there are several hundred nuts, and another box some other day several hundred sleeves. We don't put those things together.

The Court: Can you state now for your client that at no time did you ever sell a complete fitting, that you only sold the parts out of which a complete fitting could be made?

Mr. Huebner: Based on the information given me by my clients, I would state that they have at no time sold a complete fitting subsequent to the period for which infringement is claimed, rather, subsequent to the date from which infringement is asserted.

The Court: Mr. Freeman, can I ask you, do you have any evidence that you will be able to produce to show that they have sold the fitting as a whole, other than sold it as parts?

Mr. Freeman: Can I have that invoice from the Masters Company?

The Court: While they are looking that up, can I ask you something about the law?

(Testimony of John N. Wolfram.)

Mr. Freeman: Yes.

The Court: Is it your contention that if the evidence would disclose that they had made these individual parts and [268] sold them as individual parts to a third person who then assembled them, that there would be a violation?

Mr. Freeman: There certainly would, especially when you sell the three pieces. They make the entire structure of the claim, the claim calls for a fitting for use with tubes, and then they go ahead and sell all three pieces. They show them assembled in their catalogue for sale. It is just like your Honor would walk into a store and say, "I want to buy a suit comprising a coat, vest and pants," and they say the pants cost you \$20, the vest costs you \$15, and the coat costs you \$35, collectively \$70.

As far as I am concerned, that is exactly what they do with the fitting.

The Court: All right. Now let me ask you this: Supposing they manufactured and sold one million nuts that were in the public domain, is there any violation of your patent; that that is all they did, sold one million nuts?

Mr. Freeman: I would say no.

The Court: Supposing they manufactured, made and sold one million bodies that were in the public domain?

Mr. Freeman: And had not sold nuts and had not sold sleeves?

The Court: Never sold anything else.

(Testimony of John N. Wolfram.)

Mr. Freeman: They only made that, the answer again is no. [269]

The Court: So, really, the fact, then, that the only thing they did in violation of the patent, if they did it individually, would be to manufacture the sleeve with this degree of angle on the collar?

Mr. Freeman: No. When they make the three parts——

The Court: I am not talking about what they advertise.

Mr. Freeman: You are assuming a condition which, of course, is not the condition of the defendant Masters.

The Court: I am assuming that because I want to get your theory if I can. I want to understand the situation. Assuming these three parts were made and manufactured by the Masters Company. This has a tube in here, but the tube isn't supposed to be here. Now, assuming that these three parts were made and manufactured and sold by the Masters Company, individually, or let's assume this, supposing that company A made this part, that is, the body, for the record, supposing company B made the nut, and supposing company C made the sleeve?

Mr. Freeman: I don't think we could sue any one of those three companies.

The Court: They gave it to a third party who combined them together?

Mr. Freeman: Then we would sue Douglas or Lockheed who then bring about the complete infringement. We still have, and the Mercoid doctrine—I know what he is driving at, [270] the

(Testimony of John N. Wolfram.)

Mercoid decision still did not cut out contributory infringement. Then we would come back and have to charge Masters with contributory infringement, which is nothing more than aiding or abetting the act of infringement by Lockheed or Douglas, or any one of the other aircraft manufacturers that buy the three parts, put them together, and use the subject matter of the patent.

The Court: Now, if I understand you correctly, if these three parts were manufactured by three different individuals, you don't think that you could sue either one of the three?

Mr. Freeman: Except for contributory infringement.

The Court: But the fact that they were manufactured by Masters?

Mr. Freeman: Changes the picture entirely.

The Court: Then it changes the picture entirely?

Mr. Freeman: Yes.

The Court: And although these two parts, that is, the body and the nut, are in the public domain, the fact that they also manufactured something, that is, the sleeve, that wasn't in the public domain——

Mr. Freeman: And that goes along with those parts that were in the public domain, using your Honor's terms, putting those parts together to bring about what we say is in the three claims of the Parker patent, yes, that constitutes infringement. That is exactly our position. [271]

(Testimony of John N. Wolfram.)

The Court: Of course you have plenty of authorities on that line?

Mr. Freeman: We do.

The Court: Excuse me for breaking in. Now, what is the question?

(The record was read by the reporter.)

Mr. Freeman: I am going to ask Mr. Masters if the invoice I am handing him is an invoice of his company.

The Court: You can answer that yes or no. Is it or isn't it?

Mr. Huebner: We are trying to figure it out.

Mr. Freeman: I am asking, first, is it an invoice put out by the Masters Company?

Mr. Huebner: It probably is, it is on Masters stationery.

Mr. Freeman: You are not questioning that, are you?

Mr. Huebner: There is no writing on the part of Mr. Masters, so that is what we were puzzled about.

He says it is an invoice put out by Irvin W. Masters, Inc., the defendant.

Mr. Freeman: I am going to offer in evidence as Plaintiff's Exhibit 54 the Masters invoice just referred to. [272]

The Court: Well, I don't think these invoices will dispose of an issue unless they can be explained.

Mr. Freeman: That goes in next. I can either

(Testimony of John N. Wolfram.)

ask Mr. Masters for the explanation or I can ask our witness for the explanation.

The Court: Well, I don't know——

Mr. Freeman: Well, will Mr. Masters admit that the parts referred to there include a nut, body, and sleeve?

Mr. Masters: Right.

The Court: In other words, that invoice shows that they sold so many nuts, so many bodies, so many sleeves.

Mr. Freeman: Correct.

The Court: It doesn't show that they sold so many fittings.

Mr. Freeman: It shows they sold 20 fittings. If you give somebody 20 nuts, 20 sleeves, and 20 bodies, you have 20 fittings.

The Court: I don't know as I agree with you there. I don't know whether I can agree with you. That may be the law, but I don't know. If they showed that they had sold 20 fittings, I think it would be rather conclusive that they were selling fittings. That shows that they sold 20 bodies, 20 nuts, and 20 sleeves. That rather upholds their contention that they didn't sell a fitting as a whole, but they sold only the parts of a fitting. [273]

Mr. Freeman: Well, it is our position, your Honor, that when you sell 20 nuts, 20 bodies, and 20 sleeves, you bring about the infringement. That is our position.

The Court: Have you got an authority?

(Testimony of John N. Wolfram.)

Mr. Freeman: I think we will have authority on that.

The Court: If you have got a case that will hold that, I would like to read it.

Mr. Freeman: I would like to proceed along with our proof, keeping in mind that they have the burden of showing what they are trying to show, they do not infringe. I think that is up to them. Our position is that they offer them for sale when they offer them for sale in their catalog, and that is enough to keep us in court.

The Court: I have no intention of throwing you out of court. That is the last thing in my mind. I may disagree with you on your theory and on your law, but I certainly have no intention of throwing you out of court, or anything like that. But I am trying to find out what the issues are so I will have some ability to judge as to whether or not certain evidence should be allowed in or certain evidence shouldn't be allowed in. I don't want to take away from you the orderly presentation of your case. That is the last thing I want to do.

Mr. Freeman: I think we had the answer from Mr. Masters, that that invoice, Plaintiff's Exhibit 54, calls for [274] nuts, bodies, and sleeves. Then I am going to ask Mr. Masters whether or not those are for cooperating nuts, bodies, and sleeves, that is, for the same size fitting.

The Court: I just assumed that that was so.

Mr. Freeman: I thought we would button that up for the record.

(Testimony of John N. Wolfram.)

The Court: Yes, better get it in the record.

Mr. Huebner: Mr. Masters informs me that they are all of the same size, to wit, No. 4 size, and can be put together.

The Court: All right. It may be received.

(The document referred to was received in evidence and marked Plaintiff's Exhibit No. 54.)

Mr. Freeman: I assume Mr. Masters will agree that the invoice I am now handing you, which we will mark Plaintiff's Exhibit 55 for identification, is likewise an invoice of Irvin W. Masters, Inc., the defendant herein.

(The document referred to was marked Plaintiff's Exhibit No. 55 for identification.)

Mr. Huebner: Mr. Masters represents that it is **such** an invoice and to the same individual, I think.

The Court: I think, Mr. Freeman, you can get a stipulation here, at least I think that the defendants are willing to stipulate, to the effect that they not only in this particular instance, but in many instances, sold nuts, bolts——

Mr. Freeman: Nuts and bodies. [275]

The Court: Excuse me. Nuts, bodies, and sleeves in various quantities to a purchaser, that they were not sold assembled, but they were sold as individual nuts, individual bodies, and individual sleeves. I don't think there is going to be any contention to the contrary.

Mr. Huebner: We sold commercial quantities.

(Testimony of John N. Wolfram.)

That is, the defendants sold commercial quantities of individual nuts and individual sleeves and individual bodies.

The Court: To the same purchaser?

Mr. Huebner: I think so, yes.

Mr. Freeman: And on the same invoice?

Mr. Huebner: I don't know about that.

The Court: You don't need the invoices.

Mr. Huebner: I don't know about that. This thing here, I think, is a plant. That man is not a regular customer. But whether it was a plant or not, those sales were evidently consummated.

The Court: Aren't you willing to admit that these two exhibits now will form a pattern of the way you handled your sales?

Mr. Huebner: They form an exaggerated pattern, but it is true we did sell quantities of nuts and sleeves, probably to the same customer.

The Court: You can't tell me, or at least you may tell me, but I don't think I would believe you if you did, that in [276] your work during the war, when materials were scarce and everybody wanted materials, particularly such as this, that if people would order 1,000 nuts and 1,000 bodies and 1,000 sleeves, you wouldn't sell them to them just exactly like this invoice.

Mr. Huebner: It is true, no doubt the defendants would. But that was not the way the companies ordered. Actually, it was a rare instance where one company would order so many nuts and so many sleeves and so many other parts, all to go together.

(Testimony of John N. Wolfram.)

It was more or less an exception for them to do that. Actually, the way the thing worked is that Douglas would order so many nuts, Lockheed would order so many bodies, and North American would order so many other things from one company, and so many of the other parts from another company. However, that is the way it worked. We are still not denying this transaction occurred and possibly other transactions of a similar nature did occur.

The Court: I assume when you have the opportunity to substantiate your claim, you will be able to produce invoices showing that Douglas ordered 1,000 nuts and nothing else, and Lockheed ordered a thousand sleeves and nothing else?

Mr. Huebner: The burden is really on the plaintiff here.

Mr. Freeman: Then I am going to ask permission—I understand you do not have court next Monday—to send a [277] certified public accountant to make such notes as he can, limited only with respect to fittings, the subject matter here involved, no other information. We are not interested in prying into Mr. Masters' books, and that is why I suggest a public accountant. So that he can bring back the data for the court so that the court will have full information. It is our position this is a pattern, and your Honor, I think, fairly and accurately expressed it.

Mr. Huebner: That is not necessary. He can call Mr. Masters or Mr. Collins to the stand. I have offered to produce Mr. Collins on request at any time.

Mr. Freeman: Will you produce all of your

(Testimony of John N. Wolfram.)

books, and then I think we can save a tremendous——

Mr. Huebner: No.

Mr. Freeman: Then I am asking for the court to give me——

Mr. Huebner: There is no need for that.

The Court: Well, of course, it would probably be an opinion on your part, but will you produce the invoices that you say indicate the fact that these nuts and bodies and sleeves were sold in individual quantities to different individuals?

Mr. Huebner: Yes, your Honor. We will look for those. I will require the clients to look for those.

The Court: Now, may I ask you a question? Actually, [278] legally, if this would be the only instance where they sold the three parts together and the court would hold that that was the selling of the complete article, wouldn't that be an infringement? In other words, they only have to prove the one instance.

Mr. Huebner: Probably they would have established a *prima facie* case, assuming the assembly did infringe the patent. Even one act would probably be an infringement.

The Court: Let's forget everything else. The only question I want to have answered is, isn't the infringement that, whether it is one act or one thousand acts? In other words, they only have to prove the one act.

Mr. Huebner: I think for practical purposes they only have to prove one act. That might then go

(Testimony of John N. Wolfram.)

to the question of damages and whether an accounting should be ordered, but one act, technically, is an infringement, whether it is one or a thousand acts, it is technically an infringement.

The Court: Then if the court would hold against the defendants on all the issues except the issue of whether or not they sold the fitting as a whole, then those two invoices would be sufficient to sustain a finding that the defendants sold the fitting as a whole rather than as individual pieces.

Mr. Huebner: I think that as a matter of law that is correct.

The Court: I don't know why you need any more evidence, [279] Mr. Freeman.

Mr. Freeman: I want to also call your Honor's attention to the fact that we made inquiry of the defendant Masters, Inc. We asked that he produce, and I am now reading from the order or the request, which was ordered and they went along with the order, "Item No. 10. Three (3) samples of each of size No. 4 and No. 8 of a flared tube coupling consisting of a body, sleeve, and nut, now being made or procured by the defendant in accordance with Air Force-Navy design standard AND 10056, AN 818, and AN 819, with nut and body made of aluminum alloy, and the sleeve of copper silicon, aluminum bronze."

That is just the specification. We asked for three samples of size 4 and size 8 flared tube couplings. We said consisting of those three parts, and they gave us these.

(Testimony of John N. Wolfram.)

The Court: They contend they did not give them to you assembled. They gave them to you piecemeal and you assembled them. Maybe that is a question of fact that will have to be proven. In other words, you don't agree as to what actually was produced. Mr. Freeman says you produced a fitting. You say you produced the parts of a fitting.

Mr. Huebner: They are just the parts and somebody in the deposition screwed them together.

The Court: Then we will have to take some testimony as [280] to what actually happened, but I think now in the light of these two invoices, if you try to show that that is not a patent, I will refuse you the right to show it unless it comes to the question of damages. It may be important on the question of damages to determine how many times you have sold them together, rather than individually, but until that question arises, I think we will accept that as a pattern, upon your agreement that all they have to do is show one [281] instance.

Mr. Huebner: Well, one instance of an infringing act, if it is otherwise infringing, is sufficient to sustain a case, unless it is an insignificant thing. I don't think we need to make that point here.

The Court: What I am trying to do is to eliminate, if I can, the necessity of taking a great deal of testimony, and consequently cut down the time this case is going to take. If we can agree it is no

(Testimony of John N. Wolfram.)

use to bring in all those records and identify them and get them in the record.

Mr. Huebner: With your Honor's ruling that this will establish a pattern until otherwise shown, we will probably show that this is not a true pattern, and while it did exist and technically would be sufficient for the purpose of the plaintiff, that as a matter of damages it didn't exist.

The Court: I will agree with you that if the question of damages arises that the plaintiff is going to have to establish the damages, and if he can establish only one instance, he certainly wouldn't be entitled to as much damage as on a thousand of them, and he may have to have an investigation of the record. But until that question arises, Mr. Freeman, I think you can forget about it.

The clerk calls my attention to the fact that I am working too hard.

Mr. Freeman: Can we start at five minutes after two, then? [282]

The Court: No. We will recess to 2:00 o'clock.

(Whereupon, at 12:05 o'clock p.m. a recess was taken until 2:00 o'clock p.m. of the same day.) [283]

June 16, 1950—2:00 P.M.

Mr. Freeman: I would like to offer in evidence the invoice of Irvin W. Masters, Inc., invoice No. 9910, dated September 30, 1947, as Plaintiff's Exhibit 55.

The Court: It may be received.

The Clerk: No. 55.

(The document referred to was marked Plaintiff's Exhibit No. 55 in evidence.)

Mr. Freeman: I am wondering if I may have leave to substitute photostats. We do not have the photostats as yet.

Mr. Huebner: We would stipulate to that. And return the original to us?

Mr. Freeman: Oh, no, these originals are ours.

The Court: Nothing like asking.

Mr. Freeman: I want to call the court's attention to the fact that Plaintiff's Exhibit 6 and Plaintiff's Exhibit 7, two of the Masters fittings, size 4, were given to me by Mr. Masters during the taking of the depositions, and I am going to read from page 16 of the deposition with respect to those fittings. I do want to lay a proper foundation, which is here somewhat questioned, with respect to this witness applying claims of the patent to the Masters fittings.

"Q. (By Mr. Freeman): Now, Mr. Masters, we have asked [284] you to produce certain size 4 and size 8 fittings of the kind that you manufacture of these various materials. Now, have you produced such fittings?

"A. I have. I have produced fittings which I trust will serve your purpose. My reason for so responding is that we haven't given you exactly what you wanted or asked for, because

we didn't have them. In the AN 4 size aluminum fitting with aluminum nut and copper silicon sleeve, we have given you just what you asked for. In the size 8, we only have two complete assemblies to offer you, that is in the AN fitting, and we have substituted a brass nut in one assembly. On the AN fittings which you requested, we supply, with steel bodies and steel nuts and copper silicon sleeves, our face is red in that our stock contained no steel nuts. We have supplied steel bodies, steel nuts, and copper silicon sleeves, which we hope will do the trick. I am surprised our stock was so short."

JOHN N. WOLFRAM

the witness on the stand at the time of recess, having been heretofore duly sworn, resumed the stand and testified further as follows:

Direct Examination (Continued)

By Mr. Freeman:

Q. Now, Mr. Wolfram, will you take Plaintiff's Exhibit [285] 6 and Plaintiff's Exhibit 7, and take claim 1 of the Parker patent No. 2,212,183, and point out wherein you find in the physical devices elements corresponding to the various elements of claim 1 of the patent?

The Court: I wonder if we couldn't approach

(Testimony of John N. Wolfram.)

that from a different angle in the interest of saving time.

Mr. Freeman: Well, we could, your Honor——

The Court: You are asking him to point out similarities. Why can't you get the same result by asking him to point out the dissimilarities?

Mr. Freeman: Of course, if your Honor please, they have put upon us the burden of showing readability or what we call infringement of claims of the Parker patent, and we must show that the claim corresponds or reads upon the physical device that they manufacture, if we are to have a case. That is what we are starting out here to do. I think the question of dissimilarities would be improper because the question here is infringement. It must be an embodiment.

Now, I thought your Honor was going to say we would save a lot of time if we had something that was illustrative of the defendants' fitting, and we then had something definitely to tie on a phrase of the claim 2 to a corresponding illustration, so that as the case progresses your Honor will be able to follow exactly, and that is the way we started out with our drawings. But if there is any question concerning that drawing [286] then we will take the physical device, and as this witness proceeds to say, "a body member," your Honor will have to remember that there was a body member, and as he progresses then and talks about the inner surface, the inclined surface, or the parts, your Honor will just have a voluminous record to fol-

(Testimony of John N. Wolfram.)

low. We can make that record and it will take some time. That is why yesterday I asked if they might go along and agree with me that the drawing we have here represents a Masters AN fitting.

I am willing to change the heading and say it is illustrative of a Masters fitting, so that will eliminate even going so far as to say it has been made to the nth degree of accuracy. It certainly would help.

Mr. Huebner: We think it is misleading, and that is why we can't enter into the stipulation. We claim the drawing is inaccurate and [287] misleading.

The Court: Maybe we can get at this way: The witness testified that this was an AN fitting.

Mr. Freeman: Yes.

The Court: I think if the witness will testify this is an AN fitting, he can compare the claims to the AN fitting. I think it is up to the court to determine whether this AN fitting is the Masters fitting, unless they will stipulate, and evidently they don't want to stipulate, that this is the Masters fitting.

Mr. Freeman: I think they will stipulate that it is a Masters fitting.

Mr. Huebner: It was produced as an assembly of parts manufactured by Masters. The tube wasn't furnished by Masters. The tube was evidently put in by Mr. Freeman or his assistants. But Masters did supply those parts that are assembled now as fittings, Exhibits 6 and 7, and they were of Masters manufacture.

(Testimony of John N. Wolfram.)

Mr. Freeman: And they are AN parts?

Mr. Huebner: That's right.

The Court: That is not what the issue is at the present time. You have objected to the use of a diagram. You say it is not a Masters fitting. But the witness didn't testify this was a Masters fitting; he testified it was an AN fitting.

Mr. Huebner: We deny that it is true or correct even as an AN fitting. It is misleading, we [288] claim.

The Court: What I am getting at is this: I think the witness can use the diagram as an AN fitting and show us similarities, and then connect the AN fitting up with the Masters. In other words, you are taking two steps instead of one.

Mr. Huebner: I won't make any extended argument, I just want to restate my objection, and that is that there is no foundation laid to demonstrate that this drawing that he has made, identified as Exhibit 53, is a true and correct representation of the AN fitting.

The Court: I will overrule the objection as far as the AN fitting is concerned. I sustain the objection that it was a Masters fitting, upon the ground that the witness himself testified that it was the AN fitting that he made the diagram from.

Mr. Freeman: If Mr. Huebner will tell me wherein it is misleading or improperly illustrative of either an AN or Masters, I am perfectly willing. in order to expedite matters, to make such changes or modifications. What I am trying to do—we can

(Testimony of John N. Wolfram.)

do it the hard way, just as your Honor said, we can take it in two steps; but I know this, that when you have a drawing to look at that is fairly illustrative of the component parts, then when we get to determining the claims, which your Honor will have to do, you are the one that is going to have to decide this, maybe three months from now or [289] four months, or whenever it comes around, you will then know exactly what the parts refer to. They will have an opportunity to cross-examine with respect to those parts. Otherwise we are going to have to turn back to page 247 of the record and find out what was there said, and then go to page 255 of the record and find out what was there said. I am trying to make it the easy way, but I can do it the hard way, and I have done it that way. It will just take much more time.

Mr. Huebner: He is asking me, so I will answer, at least in part. But to give him the full answer would take quite a bit of time and will be part of our case. In the first place, what is obvious to everyone is that this drawing Exhibit 53 includes a flared tube. Now, that is no part of a fitting which is in issue in the case here. I don't know what kind of a tube he has shown there, or what the angles are, or anything about it, and it hasn't been established. Then, as to the parts of the so-called fitting, there are no dimensions on this drawing which would tie back to the government specifications, none whatever, and the proportions are not correct if you refer back to the AN specifications.

(Testimony of John N. Wolfram.)

Those are the reasons why I won't stipulate.

Mr. Freeman: Will you agree that it is illustrative, then?

Mr. Huebner: No, because it isn't. [290]

Mr. Freeman: O. K.

The Court: This witness is an expert, he has been testifying here for two days about drawings that he has made, he has testified that this is an AN fitting. I will allow him to use the diagram relative to the AN fitting, then it will be necessary to take another step and show that this AN fitting is a Masters fitting.

Mr. Lyon: Isn't there a stipulation that they are interchangeable?

The Court: I think there was a stipulation that they were interchangeable. But, nevertheless, I don't think you can jump at this time, under the objection of counsel. Now, I think if a foundation is laid to show the AN fitting—I think there has been a stipulation to the effect that it is interchangeable.

Mr. Freeman: I don't think there is any question but what Mr. Masters or Mr. Huebner will agree that the fitting that we have here offered in evidence as Plaintiff's Exhibit 6 is of Mr. Masters manufacture and is an AN fitting.

Mr. Huebner: That we have agreed to, and we do not renege on our stipulation that the AN fitting and the Master fitting, or parts which go to make up a fitting, which are put together to make a fitting, when manufactured to the government

(Testimony of John N. Wolfram.)

standards, are identical as to specifications. [291]

The Court: Then I will reverse myself and overrule the objection, with this understanding: that it is the opinion of the court according to the testimony that has been introduced so far, that Masters have manufactured the individual items rather than the fitting itself. There is still in dispute the question as to whether or not Masters produced the entire fitting or produced just the parts of the fitting, at the time of the deposition.

Mr. Huebner: Then, your Honor, I will be given the opportunity on cross-examination of interrogating the witness as to the sources from which he obtained the information?

The Court: Certainly.

Mr. Freeman: Then I want to renew my request for the opportunity of examining the books of the Masters Company on Monday next through a certified public accountant.

Mr. Huebner: Why does that come up again?

The Court: At the present time I will deny your request.

Mr. Freeman: Now, so that I am straight, because of the fact we are going back and forth here, do I understand the court now to hold that complete fittings were not furnished me?

The Court: No, I didn't say that. I think that matter is still in dispute as to whether a complete fitting was handed to you, or whether or not the parts were handed to you. You have read me part of the deposition. [292]

(Testimony of John N. Wolfram.)

Mr. Freeman: I am going to turn to Mr. Masters and ask him whether or not it isn't a fact that he handed me a complete fitting No. 8, connected together, and said, "Here is what you want."

Mr. Huebner: Don't you think the deposition should be referred to?

Mr. Freeman: No, I think that point is important right now. I read the deposition into the record.

The Court: The deposition is only one part of the evidence. There might be some evidence to show——

Mr. Freeman: I am turning and asking Mr. Masters as to how he handed them to me.

The Court: If he will answer it, fair enough. Or, if he doesn't want to answer, he is not on the stand and you can't require him to answer, except by stipulation.

Mr. Freeman: Do I understand that he doesn't want to answer at this time?

Mr. Huebner: If the court wants to delay while I review again with Mr. Masters the circumstances, I will talk to him. I won't stipulate without talking to him.

Mr. Freeman: I am not asking you to stipulate. I will proceed. We will do it by putting Mr. Masters on the stand at the proper time.

Q. (By Mr. Freeman): Mr. Wolfram, I am asking you now to take the physical device, Plaintiff's Exhibit 6, and compare [293] it with claim 1 of the Parker patent.

(Testimony of John N. Wolfram.)

A. Claim 1 of the Parker patent states:

“In a coupling for tubes having the ends thereof flared”——

Q. I am going to ask you whether or not the coupling that you have in your hand is for tubes having flared ends.

A. Yes, it is.

Q. Proceed.

A. ——“coupling members having threaded engagement with each other,”

I have here one coupling member which is a nut, which has an internal thread, and another coupling member, which is a body, which has an external thread, and the threads match so that the two parts can be threaded together.

Q. Referring to the chart, Plaintiff's Exhibit 50, what are the numerals that you have applied in the claim to the coupling members? [294]

A. In Exhibit 50, the numeral 3 applies to the body member, and the numeral 4 applies to the nut member.

Q. And those two parts in the Masters fittings have threaded engagement with each other?

A. That is correct. They may be threaded together. The threads match.

Q. Now, proceed with your further answer.

A. The claim goes on:

“One of said coupling members having a seat associated therewith adapted to engage the inner face of the flared end of the tube.”

I find that the body member, which is designated by numeral 3 in Exhibit 50, has a seat, which is

(Testimony of John N. Wolfram.)

designated by the numeral 5 in Exhibit 50, against which the inner face of the flared end of a tube may engage.

Q. Now, do you find that particular portion in the physical device that you have, Plaintiff's Exhibit 6?

A. I do. I find the seat to which we have just referred.

Q. Will you point that out to the court on the cutaway illustrative sample, Plaintiff's Exhibit 7?

A. That is the beveled seat against which the inner face of the flare of the tube engages.

Q. What is the number applied to Plaintiff's Exhibit 50 for that particular part? [295]

A. The body seat is numeral 5.

Q. Now proceed further with the claim.

A. The claim goes on:

“and the other coupling member,”
meaning the nut.

“having a clamping shoulder,”
I have the nut here, and if you will look inside the nut, you will see a clamping shoulder.

Q. And is that clamping shoulder illustrated in the Exhibit 7?

A. The clamping shoulder is illustrated in Exhibit 7. This clamping shoulder is also designated by the numeral 7 in Exhibit 50.

The Claim goes on to say:

“a sleeve surrounding said tube,”
I find here a sleeve.

Q. And is that sleeve adapted to go round the tube, having a flare at one end?

(Testimony of John N. Wolfram.)

A. Yes, that is correct. The sleeve has a bore through it through which a tube may be inserted.

Q. And is that general make-up illustrated in Plaintiff's Exhibit 7? A. Yes, it is.

Q. And that is, the tube is inserted in the illustrative model? [296]

A. In Exhibit 7, the tube has been inserted.

Q. And the lower end of the tube or the inside of the flare seats against the seat on the body member? A. That is correct.

Q. And that likewise is illustrated in Plaintiff's Exhibit 7? A. That is correct.

Q. Proceed. A. The claim goes on:

"and having a solid head provided with a shoulder,"

I find in Exhibit 6 that the sleeve has a solid head and a shoulder. The solid head is designated in Exhibit 50 by the numeral 9 and the shoulder by the numeral 10. The head and shoulder are also present in Plaintiff's Exhibit 7.

Q. And likewise in Plaintiff's Exhibit 6, which is the one not cut apart?

A. Yes. I have already so stated.

Q. Proceed.

A. The claim goes on:

"against which the clamping shoulder of the coupling member engages,"

This refers to the clamping shoulder of the sleeve and means that the shoulder of a nut may engage the clamping shoulder of the sleeve.

(Testimony of John N. Wolfram.)

I find in Exhibit 6 that the sleeve may be inserted in [297] the nut with the respective clamping shoulders in engagement.

I find in Exhibit 7 that the clamping shoulders are in engagement.

The clamping shoulders are given the numerals 7 and 10 in Exhibit 50; 7 being the nut shoulder and 10 being the sleeve shoulder.

The claim goes on:

“said head having the inner surface thereof provided with a coniform flare,”

I find in the sleeve of Plaintiff's Exhibit 6 that the inner surface is provided with a coniform flare. The flare is also present in Exhibit 7, and the flare is identified by the numeral 11 in Exhibit 50.

The claim goes on, referring to the coniform flare:

“so shaped that the initial contact of the head with the flared end of the tube is at the free end of the head and adjacent the outer end of the flared end of the tube,”

I find in the sleeve of Plaintiff's Exhibit No. 6 that the flared surface of the sleeve is cut back so that the initial contact would occur at the free end of the head and adjacent the outer end of a flare.

I find that the sleeve in Plaintiff's Exhibit 7 is also so shaped and is in this position, that is, the sleeve head is in contact at the free end of the head with the flare. [298]

The claim goes on to state:

“whereby during the clamping action said head

(Testimony of John N. Wolfram.)

will be expanded and moved forward along the flared end of the tube into intimate contact with the outer surface thereof through substantially the entire extent of the flared surface of the sleeve head."

I find in Plaintiff's Exhibit 7 that the sleeve head has been expanded and is in contact with the greater portion of the flare.

Q. I now hand you Plaintiff's Exhibits 37 and 38, which are AN fittings made by the Parker Appliance Company, Exhibit No. 37 being a complete fitting, and Plaintiff's Exhibit No. 38 being a cut-away section, and I am going to ask you to read claim 1 of the Parker patent upon Plaintiff's Exhibits 37 and 38.

Mr. Huebner: That is, if you can. That question rather tells the witness what he is to do. I think it is quite suggestive.

Q. (By Mr. Freeman): Well, then, I will add to my question, will you endeavor or proceed to apply claim 1 to the Parker fittings, AN size 4, following substantially the same pattern of presentation that you followed in connection with Plaintiff's Exhibits 6 and 7?

A. The claim states:

"In a coupling for tubes having the ends thereof [299] flared"

I find that this is a coupling for tubes having their ends flared.

"coupling members having threaded engagement with each other,"

(Testimony of John N. Wolfram.)

I find a nut and a body, each having threads which are capable of being inter-engaged.

The claims goes on to say:

“one of said coupling members having a seat associated therewith adapted to engage the inner face of the flared end of the tube”

I find on the body member a seat, which is adapted to engage the inner face of a flared end of a tube. The claim proceeds:

“and the other coupling member having a clamping shoulder”

I find on the two exhibits that the other coupling member, which is the nut, has a clamping shoulder.

The claim goes on to say:

“a sleeve surrounding said tube and having a solid head”

I find in both exhibits a sleeve surrounding the tube and having a solid head. [300]

The claim proceeds:

“provided with a shoulder against which the clamping shoulder of the coupling member engages,”

I find that both sleeves of the two exhibits have a clamping shoulder against which the clamping shoulder of the nut may engage.

The claim goes on:

“said head having the inner surface thereof provided with a coniform flare so shaped that the initial contact of the head with the flared end of the tube is at the free end of the head

(Testimony of John N. Wolfram.)

and adjacent the outer end of the flared end of the tube,”

I find that both exhibits have the sleeves formed with a coniform flare and so shaped that the initial contact of the flared end of the tube will be at the free end of the head and adjacent the outer end of the flared end of the tube.

The claim goes on further:

“whereby during the clamping action said head will be expanded and moved forward along the flared end of the tube into intimate contact with the outer surface thereof throughout substantially the entire extent of the flared surface on the sleeve head.” [301]

I find in Plaintiff's Exhibit No. 38, which has been assembled tightly, that the sleeve head has been expanded and moved forward along the flared end of the tube into contact with the outer surface of the flare throughout substantially the entire extent of the flared surface on the sleeve head.

Q. Now, the two fittings that you had in your hand, that is, Plaintiff's Exhibits 37 and 38, do you know those to be of Parker's manufacture?

A. Yes, they are of Parker manufacture.

Q. And they are the AN fittings?

A. That is correct.

Q. And made in accordance with AN specifications? A. That is correct.

Q. Now, I am going to hand you Plaintiff's Exhibits 5 and 8, which are in evidence, Plaintiff's

(Testimony of John N. Wolfram.)

Exhibit 5 being a Masters fitting size 8, and Plaintiff's Exhibit 8 being a similar fitting with a cut-out section for illustrative purposes, and a piece of tubing therein, and I will ask you to take claim 2 of the Parker patent and read claim 2 on Plaintiff's Exhibits 5 and 8, if you can.

A. Claim 2 of Parker patent 2,212,183 states:

“In a coupling for tubes having the ends thereof flared,”

I recognize both of the Plaintiff's Exhibits 5 and 8 as [302] couplings for tubes having the ends thereof flared.

Q. When you point out the various component parts, will you then turn to the claim chart which appears as part of Plaintiff's Exhibit 51?

Mr. Huebner: I make the same objection in so far as reference goes to Exhibit 51.

The Court: The same ruling. I don't think there was any objection to Exhibit 51.

Mr. Freeman: I don't think there is, either. That is just the claim chart. I think you were worried about 53.

The Court: He is not using 53 at all.

Mr. Huebner: All right. I will withdraw the objection.

A. Exhibit 51 illustrates the tube as No. 1 and the flared end as No. 2.

Q. (By Mr. Freeman): I am going to ask you to limit your answers to the claim portion, that is, the chart with respect to the claim part, and refer

(Testimony of John N. Wolfram.)

only to the numbers on that side, and not necessarily to the drawings.

A. The claim proceeds:

“coupling members having threaded engagement with each other,”

I find in both Exhibits 8 and 5 that there are coupling members having threaded engagement with each other.

In Exhibit 51 the coupling members are indicated by the numerals 3 and 4 in the claim as reproduced therein. [303]

The claim proceeds:

“one of said coupling members having a seat associated therewith for engaging the inner flare of the flared end of the tube”

I find that in Exhibits 5 and 8 that one of the coupling members, namely, the body, which is identified by the numeral 3 in the claim on Exhibit 51, has a seat identified by the numeral 5 on Exhibit 51, for engaging the inner flare of the flared end of the tube, the inner flare of the flared end of the tube being identified with the numeral 6 in the claim on Exhibit 51.

The claim proceeds:

“and the other coupling member”—meaning the nut—“having a clamping shoulder and an inner wall,”

I find that in both Exhibits 5 and 8 that the nut member has a clamping shoulder and an inner wall, and these parts are identified in Exhibit 51 in the claim portion as numeral 7 for the clamping

(Testimony of John N. Wolfram.)

shoulder and numeral 8 for the inner wall.

The claim proceeds:

“a sleeve surrounding said tube and having a solid head capable of radial expansion during the clamping action,”

I find in Exhibit 5 that the sleeve has a bore there through, through which a tube may be inserted. In Exhibit 8 the sleeve [304] has a bore which surrounds a tube that has been inserted. The sleeve is identified in the claim of Exhibit 51 with the numeral 9. I find, also, that the sleeve of Exhibit 5 and of Exhibit 8 has a solid head, which is capable of radial expansion during the clamping action. This head is identified by the numeral 10 in the claim of Exhibit 51.

The claim proceeds:

“said head being provided with a clamping shoulder against which the shoulder of the coupling member engages”

I find in Exhibits 5 and 8 that the sleeve head has a clamping shoulder against which the shoulder of the nut engages. This clamping shoulder of the sleeve head is identified by the numeral 11 in the claim on Exhibit 51.

The claim proceeds:

“and an inner flare surface for engaging the outer flared end of the tube,”

I find in both Exhibits 5 and 8 that the sleeve has an inner flared surface for engaging the outer flared end of a tube. This inner flare surface is

(Testimony of John N. Wolfram.)

identified by the numeral 12 in the claim of Exhibit 51.

The claim proceeds:

“said clamping shoulder being spaced a distance back of the inner flare surface,”

I find in both Exhibits 5 and 8 that the clamping shoulder of [305] the sleeve head is spaced a distance back of the inner flare surface.

The claims proceeds:

“the outer surface of said head and the said inner wall of the coupling member being so shaped relative to each other that when the sleeve head expands during the clamping action they will contact only in the region of the clamping shoulder, the remaining portion of the head being free from contact with the coupling member whereby the clamping force of the head against the tube is determined by the spring tension of the metal forming said head”

I find that in both Plaintiff's Exhibits 5 and 8 that the sleeve head has an angle on its outer surface, and that this surface is so shaped relative to the inner wall of the coupling member or nut that when the sleeve head expands during the clamping action they will contact only in the region of the clamping shoulder of the sleeve, and that the remaining portion of the head will be free from contact with the coupling member or nut, whereby the clamping force of the head against the tube is

(Testimony of John N. Wolfram.)

determined by the spring tension of the metal forming the head of the sleeve. [306]

Q. I am going to ask you whether or not, prior to your preparing yourself to testify with respect to Masters fittings No. 4 and No. 8, which you have here referred to, you used the deposition fittings or the fittings produced at the deposition, and made as accurate measurement of the parts as you possibly could?

A. Yes, I did take measurements of the fittings you mention.

Q. And that was made some time ago?

A. That is correct.

Q. I now hand you a sheet entitled "Masters Deposition Fittings, Measurement of Parts," which we will ask the clerk to mark Plaintiff's Exhibit 56——

The Clerk: No. 56.

(The document referred to was marked Plaintiff's Exhibit No. 56 for identification.)

Q. (By Mr. Freeman): ——and I am going to ask you to state just what you did in connection with the measurement.

A. I may not have made an exactly correct answer on that last question, that is, these measurements were made at my direction, not by myself personally. I did not mean that they were made by myself personally.

Q. First, may I ask, are those the same type measurements that are made under your direction

(Testimony of John N. Wolfram.)

for Parker fittings in order to match up AN specifications or standards? [307]

A. If I understand your question correctly, do you mean are these the type of measurements made in the regular course of production?

Q. Yes. Did you measure these any differently or have them measured any differently than what you use for your own production of AN fittings?

A. I am not sure that I can give an exact answer on that. I used the same type of instruments that we used. For example, we have plug gauges for gauging the holes, which I know are used in production, and we used a comparitor to measure the angles, which I know are used in the regular course of production, and we used micrometers.

Q. What I am getting at is, did you use the same technique, put it that way?

A. That is correct. I may not have measured each dimension with the exact tool or with the method which the production people do, but we used the same tools generally.

Is there a question pending?

Q. I think that answers it. You had the measurements made up, that is, taken and recorded from Masters fittings? A. That is correct.

Q. And how do these measurements that appear upon Plaintiff's Exhibit 56 for identification compare or meet up with the AN specifications? [308]

A. They are substantially within the specifications set up in the AN sheets.

Mr. Freeman: I am going to offer in evidence as Plaintiff's Exhibit 56 the photostat entitled

(Testimony of John N. Wolfram.)

“Masters Deposition Fittings, Measurement of Parts.”

The Court: It may be received.

The Clerk: No. 56.

(The document referred to was received in evidence and marked Plaintiff's Exhibit No. 56.)

Q. (By Mr. Freeman): I am going to ask you whether or not you followed the same procedure for the Collins deposition fittings.

A. Yes. I followed the very same procedure.

Mr. Freeman: Will you mark this as Plaintiff's Exhibit No. 57 for identification?

(The document referred to was marked Plaintiff's Exhibit No. 57 for identification.)

Q. (By Mr. Freeman): And likewise the measurements of the Collins fittings were made under your direction? A. That is correct.

Q. And at your request?

A. That is correct.

Q. And made prior to the time that you prepared yourself to testify in this case?

A. That is correct. [309]

Q. And, incidentally, may I ask, do you happen to have any similar data in connection with any measurements that you made of Parker AN fittings?

A. I believe I have some data, but it is not prepared in the same manner that this is and may not have the same dimensions, that is, it may not be as complete as this.

(Testimony of John N. Wolfram.)

Q. I am just informed that you have some data at the hotel. May I ask that you bring it with you on Tuesday next?

A. I will, whatever we have.

Q. I am going to ask you to take Plaintiff's Exhibits 43 and 44, which have already been referred to as Parker size 8 AN fittings, one being complete and the other being cut in section, and apply claim 2 of the Parker patent thereto, if you can.

Mr. Huebner: Your Honor, we can save a little time if he will just ask him if the answer would be the same as with respect to the application to the Masters fittings.

Mr. Freeman: I will so ask.

The Court: Fine.

The Witness: I am sure the answer would be the same.

The Court: You'd better not say "I am sure." You'd better say, "The answer will be the same."

The Witness: The answer will be the same.

Q. (By Mr. Freeman): As a matter of fact, prior to [310] your testifying today, you have checked claim 2 against the Parker No. 8 fitting, is that correct?

A. That is correct.

The Court: Well, in the light of that stipulation and the time we have saved, I think we will take a recess. We will now recess until 15 minutes after 3:00.

(Recess.) [311]

(Testimony of John N. Wolfram.)

Q. (By Mr. Freeman): I asked you with respect to Plaintiff's Exhibit 57, that is, the measurements with respect to the Collins fittings, whether or not you followed the same procedure that you follow at the Parker Appliance Company in connection with mic-ing up fittings? I am talking about taking measurements as distinguished from actual production operations.

A. That is correct, I follow the same procedure.

Q. What do you do in production for measurements, what do you use?

A. Well, in production we use a lot of go and no go gauges for routine production checking. Of course, we also use micrometers and comparitors for spot checking.

Q. In other words, when a fitting is made up, if it works in a go or no go gauge, then it is an acceptable fitting?

A. That is correct.

Q. Even though there may be a tolerance plus or minus a fraction of a thousandth of an inch?

A. That is correct, we are not interested in knowing the exact dimensions, we are just interested in knowing that it lies between two dimensions.

Q. When you measured up or had measured up the Masters fittings and Collins fittings, you then were interested in the actual measurements?

A. That is correct. [312]

Q. When you measured up a Parker fitting for actual measurement you followed the same pro-

(Testimony of John N. Wolfram.)

cedure as you followed in connection with Masters and Collins fittings, is that correct?

A. That is correct.

Mr. Freeman: I now offer in evidence Plaintiff's Exhibit 57, which is the drawing or tabulation entitled "Collins Deposition Fittings Measurement of Parts."

The Court: It may be received.

(The drawing, heretofore marked Plaintiff's Exhibit 57 for identification, was received in evidence.)

Q. (By Mr. Freeman): I am going to hand you, again, Plaintiff's Exhibits 6 and 7, which are the Masters size 4 AN fittings, and will ask you to turn to claim 3 of the patent in suit and apply the claim, if you can.

Mr. Huebner: Might it be possible, Mr. Freeman, to let him answer a double or triple-barreled question and have him give the same answer as to Collins as he did to Masters, and also the same answer to the Parker-manufactured fittings, so you don't have to ask it three times?

Mr. Freeman: I would rather have him apply the claim first specifically, if he can, to the Exhibits 6 and 7, and then I will make a short question with respect to Collins and Parker. I am afraid of double-barreled questions.

The Witness: Claim 3 of the Parker patent states: [313]

"In a coupling for tubes having the ends thereof flared"

(Testimony of John N. Wolfram.)

I recognize both of these Exhibits 6 and 7 as being couplings for tubes having their ends flared.

The claim goes on:

“coupling members having threaded engagement with each other”

Both of these exhibits include coupling members having threaded engagement with each other. [314]

Q. You might use Plaintiff's Exhibit 52, which is the claim sheet with numbers thereon and the corresponding parts illustrated in the drawing, in connection with your application of the claim.

A. In Exhibit 52 the claim reproduced therein shows a numeral 1 as being the tube and the numeral 2 as being the flared end of the tube. The numerals 3 and 4 represent the coupling members, which are threaded together.

The claim goes on:

“One of said coupling members having a seat associated therewith adapted to engage the inner face of the flared end of the tube”

I find in the Exhibits 6 and 7 that there is a coupling member, namely, the body, which is identified by the numeral 3 in the claim on Exhibit 52, and that this body has a seat identified as 5 in Exhibit 52, which seat is associated with the body, and which is adapted to engage the inner face of the flared end of a tube.

The claim goes on to state:

“and the other coupling member having a clamping shoulder”

I find in both of the Exhibits 6 and 7 that the other

(Testimony of John N. Wolfram.)

coupling member, namely, the nut, 4, as identified in the claim of Exhibit 52, has a clamping shoulder, which is identified by the numeral 7 in [315] Exhibit 52.

The claim goes on:

“a sleeve surrounding said tubing and having a solid head provided with a shoulder against which the clamping shoulder of the coupling member engages”

I find in both of the Exhibits 6 and 7 that there is a sleeve, which in Exhibit 6 may receive a tube, and which in Exhibit 7 does surround a tube. The sleeve is identified in Exhibit 52 by the numeral 8.

I also find that the sleeves of Exhibits 6 and 7 have a solid head provided with a shoulder, against which a clamping shoulder of the coupling member or nut engages.

The solid head is identified by the number 9 in Exhibit 52, the shoulder by the number 10, and the clamping shoulder of the nut by the number 7.

The claim goes on:

“said head having the inner surface thereof provided with a coniform flare so shaped that the initial contact of the head with the flared end of the tube is at the free end of the head and adjacent the outer end of the flared end of the tube”

I find in Exhibits 6 and 7 that the sleeve head has an inner surface provided with a coniform flare, and that the flare is so shaped that the initial con-

(Testimony of John N. Wolfram.)

tact of the sleeve head with the [316] flared end of the tube is at the free end of the head and adjacent the outer end of the flared end of the tube.

The inner surface, which is provided for the coniform flare, is identified in Exhibit 52 by the number 11, and I believe the other parts referred to have already been identified by number.

The claim goes on:

“the outer surface of said head and said inner wall of the coupling member being so shaped relative to each other that when the sleeve head expands during the clamping action, the portion of said head contacting with the flared end of the tube is at all times out of contact with the coupling member whereby the clamping face of the head against the tube end is determined by the spring tension of the metal forming said head.”

I find that in Plaintiff's Exhibits 6 and 7, the outer surface of the head, which is identified by the numeral 12 in Exhibit 52, and the inner wall 13 of the nut, are so shaped relative to each other that when the sleeve head expands during the clamping action, the portion of the sleeve head which contacts the flared end of the tube is at all times out of contact with the nut or coupling member 4, whereby the clamping force of the sleeve head against the tube end is determined by the spring tension of metal forming the head. [317]

Q. I am going to ask you to take a Collins size

(Testimony of John N. Wolfram.)

4 fitting, which is in evidence as Plaintiff's Exhibit 10, and apply claim 2 of the patent in suit thereto, if you can.

Mr. Huebner: Can't he shorten that, your Honor, by saying, if it is to be his answer, that he would apply it in the same way that he applied the claim 2 against the Masters parts assembled? Or do we have to listen to it all through again?

The Court: It is perfectly all right with me, unless Mr. Freeman is trying to make a record and he wants it in the record.

Mr. Freeman: I think we should have, your Honor, at least one claim applied to a Collins fitting of the various sizes that are here, and then I think we can agree with defendant that he would answer with respect to other sizes, just as he did in connection with Masters.

Mr. Huebner: I only made the suggestion to try to speed up the proceedings.

Mr. Freeman: I think we will just go along with the one claim on the one fitting, and then we will get the catch-all.

The Court: All right.

A. Claim 2 of the Parker patent states:

"In a coupling for tubes having the ends thereof flared," [318]

I find that this is a coupling for tubes having flared ends.

"coupling members having threaded engagement with each other,"

The Exhibit 10 has coupling members in engage-

(Testimony of John N. Wolfram.)

ment with each other, namely, a nut 4, as indicated in the claim on Exhibit 51, and a body 3.

The claim goes on:

“one of said coupling members having a seat associated therewith for engaging the inner flare of the flared end of the tube”

I find that the body member of Exhibit 10 has a seat identified as 5 in Exhibit 51 for engaging the inner flare 6 of the flared end of the tube.

The claim goes on:

“and the other coupling member having a clamping shoulder and an inner wall,”

I find that the nut member of Exhibit 10 has a clamping shoulder 7 and an inner wall 8 as identified on Exhibit 51.

The claim goes on:

“a sleeve surrounding said tube and having a solid head capable of radial expansion during the clamping action,”

I find such a sleeve in Plaintiff's Exhibit 10. The sleeve is identified by the number 9 in Exhibit 51 and the solid head as No. 10. [319]

The claim goes on:

“said head being provided with a clamping shoulder against which the shoulder of the coupling member engages and an inner flare surface for engaging the outer flared end of the tube,”

I find such a head identified as 10 in Exhibit 51 in Exhibit 10, and that it is provided with a clamping

(Testimony of John N. Wolfram.)

shoulder 11 against which the shoulder 7 of the nut engages.

The claim goes on:

“and an inner flare surface for engaging the outer flared end of the tube,”

I find such an inner flare surface in the Exhibit 10, and it is marked as 12 in Exhibit 51.

The claim goes on:

“said clamping shoulder being spaced a distance back of the inner flare surface”

I find that the clamping shoulder in Exhibit 10 is spaced a distance back of the inner flare surface.

The claim goes on:

“the outer surface of said head and the said inner wall of the coupling member being so shaped relative to each other that when the sleeve head expands during the clamping action they will contact only in the region of the [320] clamping shoulder, the remaining portion of the head being free from contact with the coupling member whereby the clamping force of the head against the tube is determined by the spring tension of the metal forming said head.”

I find that the outer surface of the sleeve head, identified as 13 in Exhibit 51, and the inner wall 8 of the coupling member, or nut 4, are so shaped relative to each other that when the sleeve head expands during clamping action they will contact

(Testimony of John N. Wolfram.)

only in the region of the clamping shoulder, and that the remaining portion of the head is free from contact with the coupling members or nut whereby the clamping force of the head against the tube is determined by the spring tension of the metal forming said head. [321]

Q. If I were to ask you the same question in connection with Collins fitting, size 8, Plaintiff's Exhibit 11, and a comparison thereof with claim 2 of the Parker patent, would your answer be the same? A. May I have the cut-away?

Q. We don't have a cut-away of that one.

A. We did.

Mr. Huebner: Did the witness answer the question?

Mr. Freeman: No. He is looking for a cut-away of the same one.

The Court: What was the number of that?

The Witness: The exhibit which I have, that is, Exhibit 11, is not cut away and I am not sure that I am prepared to answer the question from the loosely assembled parts.

Mr. Freeman: Can we agree that at least it is an AN fitting?

Mr. Huebner: I think it is. I will check it.

Mr. Freeman: This witness is very, very careful, as you can well notice.

Mr. Huebner: Let's see what you have.

Mr. Freeman: It is a Collins AN fitting, size 8, of steel.

(Testimony of John N. Wolfram.)

Mr. Huebner: This is one that was produced, I mean the parts were produced by Mr. Collins at the deposition, [322] weren't they?

Mr. Freeman: Yes.

Mr. Huebner: We will agree this is an AN fitting made according to AN standards. Is that what you want?

Mr. Freeman: That's right.

Mr. Huebner: And we had better identify the exhibit number.

Mr. Freeman: Referring now to Plaintiff's Exhibit 11.

Mr. Huebner: Plaintiff's Exhibit 11.

Q. (By Mr. Freeman): I am going to ask you whether or not your answer with respect to a Parker No. 8 fitting made of steel, Plaintiff's Exhibit 6, would likewise read upon claim 2 in the same manner that you apply claim 2 to the Collins fitting, plaintiff's Exhibit 10. A. Yes.

Q. And the Parker steel fitting, Plaintiff's Exhibit 46, is likewise an AN fitting?

A. That is correct.

Q. I am going to ask you whether or not the Parker No. 24 fitting, Plaintiff's Exhibits 32 and 33, likewise read upon claim 2.

A. Claim 2 will read upon these fittings.

Q. When you say "these fittings," you are referring to Plaintiff's Exhibits 32 and 33?

A. That is correct.

Q. And they are likewise AN fittings? [323]

(Testimony of John N. Wolfram.)

A. That is correct.

Q. Now, will you turn to Plaintiff's Exhibit 53 for identification and tell me whether or not the nut portion shown in the drawing is fairly illustrative of the nut of the Masters fitting, Plaintiff's Exhibit 6, that is, a section cut through the nut or a central sectional view? A. It is.

Q. And will you tell me whether or not the drawing of Plaintiff's Exhibit 53 for identification is a fairly accurate representation of a central section of the body member corresponding to Plaintiff's Exhibit 6? A. It is.

Q. And have you examined the sleeve of Plaintiff's Exhibit 6 and, if so, will you tell me whether or not Plaintiff's Exhibit 53 for identification is fairly accurate as illustrating the sleeve?

A. I have examined it, and it is.

Mr. Freeman: I am now going to renew my offer of Plaintiff's Exhibit 53 for identification as illustrative of a Masters fitting, particularly the fitting, Plaintiff's Exhibit 6.

Mr. Huebner: It is still not competent, your Honor; no foundation laid with respect to the tube that is in there.

The Court: Overruled. It may be [324] received.

(The drawing referred to was received in evidence and marked Plaintiff's Exhibit No. 53.)

The Court: Might I ask counsel a question?

(Testimony of John N. Wolfram.)

Mr. Freeman: Yes, sir.

The Court: Assuming that these were in the same box or bin, or whatever it is, that you keep these fittings in, that is, the whole fitting, and the purchasing agent of an airplane factory would pick up the fitting, could he tell the difference between a Masters fitting and the Parker fitting, if they were not marked in any way?

Mr. Freeman: No, sir.

Mr. Huebner: I don't think he could. That is the Parker Manufacturing fitting? You are forgetting the patent now?

Mr. Freeman: That is what the court asked about.

The Court: I am talking about a fitting made by Parker.

Mr. Huebner: If you take an AN fitting made by Parker and an AN fitting made by Collins or Masters, I don't believe anybody could tell the difference, except by reference to markings on them.

The Court: And if there were no markings at all, no marking to show who was the manufacturer——

Mr. Huebner: I don't believe the airplane company or the customer would know who made them.

The Court: Could an engineer discover it? Could he go [325] back and take it apart and determine a difference? That is, assuming that the workmanship was the same?

Mr. Huebner: I don't think they could tell the difference. The requirements are that they put markings on them, but assuming your Honor's

(Testimony of John N. Wolfram.)

premise that there were no markings, I don't think even an engineer could tell.

Mr. Freeman: I don't think any of the manufacturers, as capable as they are, unless by one chance out of a thousand when they might be able to guess which was theirs, could tell. As far as the products are concerned, they are what we call identical twins.

The Court: I know I couldn't tell, but I was wondering the experts could tell. [326]

Mr. Huebner: I don't think so, and Mr. Freeman seems to feel that way, too.

Mr. Freeman: I will say this: I have looked at just literally hundreds of them that we have gotten from Collins, Masters, and Parker, and the only way I can tell them apart is to look on the unit itself. But when I have my glasses off they all look alike.

Mr. Huebner: That same thing is probably true from all the other independent manufacturers who have copied the same thing.

Mr. Freeman: Mark this, please.

(The document referred to was marked Plaintiff's Exhibit 58, for identification.)

Q. (By Mr. Freeman): I hand you a drawing or chart which has been marked Plaintiff's Exhibit 58, for identification, and will ask you to look at the drawing and tell me whether or not the section of the nut there shown corresponds to and fairly illustrates the nut of Plaintiff's Exhibit 5.

A. It does.

(Testimony of John N. Wolfram.)

Q. What do you have to say about the portion of the drawing which is shown in section, that is, central section, corresponding to the body of the physical unit that you have in your hand?

A. That the drawing is illustrative of the body.

Q. And is it likewise illustrative of the [327] sleeve?

A. It is.

Q. And in your opinion does the drawing forming a part of Plaintiff's Exhibit 58 accurately portray and represent an AN fitting?

A. Yes, it does.

Q. And does it accurately and fairly represent the AN fitting that you have in your hand, Plaintiff's Exhibit 5?

A. It does, as an illustration.

Mr. Freeman: I am going to offer Plaintiff's Exhibit 58 as illustrative of Plaintiff's Exhibit 5.

The Court: It may be received.

(The document heretofore marked Plaintiff's Exhibit 58, for identification, was received in evidence.)

Mr. Freeman: Mr. Huebner, I was going to put in two similar drawings, or at least one similar drawing, illustrating claim 2 and the Collins single angle sleeve. Might it go in subject to the same objection that you made in connection with the Masters?

Mr. Huebner: Do you mean you haven't got it here?

(Testimony of John N. Wolfram.)

Mr. Freeman: I have got it here. I will show you what I have.

I am going to ask the clerk to mark the drawing entitled "Collins Fitting with Single Angle Sleeve" as Plaintiff's [328] Exhibit 59.

(The drawing referred to was marked Plaintiff's Exhibit 59, for identification.)

Mr. Freeman: And I am going to call the court's attention to the fact that the body member in the drawing is illustrated as a unit that we call a straight, whereas the physical device that we have the body member is a "T."

Mr. Huebner: We make no point of that difference, your Honor.

Mr. Freeman: In other words, I might say this is the type of device where they use two fittings to one body member, maybe two tube connections to one body member.

Q. (By Mr. Freeman): I am going to ask you to state, aside from the body member, does the drawing, Plaintiff's Exhibit 59, for identification, fairly and accurately represent the sleeve member, the angle on the body member, and a nut member?

A. This drawing is illustrative of those points.

Mr. Freeman: I am going to offer in evidence as Plaintiff's Exhibit 59 the drawing entitled "Collins Fitting With Single Angle Sleeve."

The Court: It may be received.

(The drawing, heretofore marked Plaintiff's Exhibit 59, for identification, was received in evidence.) [329]

(Testimony of John N. Wolfram.)

The Court: I notice, Mr. Freeman, it is now 4:00 o'clock. Might I inquire how much additional time do you think it is going to take for you to present your case?

Mr. Freeman: I think we are going to wind up with this witness in not over—and I am scared to death, in view of a little cartoon that my friend Mr. Huebner gave me—to say it was only going to take five minutes, but it is actually going to take very little with this witness as far as we are concerned. Now, I can't speak for Mr. Huebner with respect to cross-examination and possible redirect.

The Court: Is this the only witness you are going to use?

Mr. Freeman: I have one other witness but it will be a relatively short witness. We certainly won't get into all these details.

Mr. Huebner: What would you say, another half a day or a day altogether?

Mr. Freeman: Half a day.

Mr. Huebner: Before I get to cross-examine?

Mr. Freeman: You are going to be able to cross-examine this individual, I would say, within 10 or 15 minutes after we start, so come prepared.

The Court: I just want to impress upon you again that if we don't complete the case next week it may go over to September or October. [330]

Mr. Freeman: Couldn't we possibly sneak a day in there after your July 5th, or when you come back from your Judges Conference?

The Court: I don't know. I have got other

(Testimony of John N. Wolfram.)

cases scheduled. I would like to get this out of the way this next week, if I can.

Mr. Freeman: We are going to try very, very hard.

The Court: It seems to me if any matter comes up that can be reached by stipulation, that counsel ought to be willing to stipulate to it.

Mr. Huebner: We surely will try. I have been stipulating to whatever I felt was proper to stipulate to.

The Court: I am not saying anything to the contrary.

Mr. Huebner: And I will continue to do that.

Mr. Freeman: You will find us the same way.

Mr. Huebner: The clerk might hand the court this cartoon, as long as counsel has seen it.

The Court: Well, I find this is very typical on many, many occasions, counsel will say, "I have just one more question," and then they go for half, three-quarters of an hour on one question. It is very typical.

We will recess this case now until 10:00 o'clock next Tuesday morning.

(Whereupon, at 4:05 o'clock p.m., Friday, June 16, 1950, an adjournment was taken to 10:00 o'clock a.m., Tuesday, June 20, [332] 1950.)

(Testimony of John N. Wolfram.)

Tuesday, June 20, 1950—10:00 A.M.

The Clerk: Parker Appliance v. Masters and Collins.

Mr. Freeman: Mr. Wolfram. You may cross-examine.

JOHN N. WOLFRAM

called as a witness by and on behalf of the plaintiff, having been previously sworn, was examined and testified further as follows:

Cross-Examination

By Mr. Huebner:

Q. Mr. Wolfram, I gather from your testimony that you have devoted a great deal of time to the preparation of this case, is that correct?

A. I have spent quite a bit of time on the case, yes.

Q. A matter of a good many weeks, I presume?

A. Well, it has been scattered throughout the period in which we have been waiting to come to trial.

Q. Anyway, you are thoroughly familiar with the Parker patent in suit that is the basis of the complaint, No. 2,212,183?

A. I am quite familiar with it.

Q. Did you have any difficulty in understanding what is disclosed and claimed in that patent?

A. I don't believe so. [333]

Q. Do you feel that it is complete in all respects

(Testimony of John N. Wolfram.)

so that one skilled in the art may understand what is taught by the patent? A. I think so.

Q. Will you please refer to page 2 of the patent, column 1, down near the bottom of the column beginning at line 60? I direct your attention to the paragraph there reading as follows:

“While I have illustrated the invention embodied in a tube coupling wherein the seat against which the flared end of the tube is clamped is in the form of a male member and the nut co-operating with the inner sleeve is in the form of a female member, it is obvious that these parts may be reversed and the clamping seat formed of a female member while the sleeve is forced against the tube end by a male member.”

Now, I will come later to the rest of the paragraph, but I wish you would please quickly sketch on a piece of blank paper your interpretation of that sentence which I just read. Here is a piece that may be convenient; it is ruled and has little squares in it, if you would like to use that.

A. All right, thank you.

(Witness sketching on paper.) [334]

Q. We won't call you to task for rough work, just so we get the illustration free-hand.

A. I appreciate that.

Q. One side is enough. You can make a section showing just half of it. A. Thank you.

The Court: While he is working on that, can I

(Testimony of John N. Wolfram.)

ask you a question? Supposing that doesn't mean anything, supposing it is unintelligible, how would it affect the patent? Supposing he has claimed something that can't be done, does that affect the patent in any way?

Mr. Huebner: It may; and there are other reasons, your Honor. I will be glad to state to the court and counsel.

The Court: I assume you have something in mind.

Mr. Huebner: Yes, I have.

The Court: And I was trying to find out. Assuming that it could not be done, that is, that you could not reverse these two pieces and make a good patent? Of course, if you reverse these two things, evidently the thing that is important is the collar and shape of the collar. [335]

Mr. Huebner: It may be. I don't know what he is coming up with. But there are two theories on which I think the question is proper. I would be glad to state to your Honor in the presence of counsel the reasons for this and three or four other questions along this line.

The Court: I am asking you as a matter of law. Supposing we have a patent, a patent application or a patent as granted, and they have a paragraph or a sentence in it and nobody knows what it means. Does that invalidate the patent?

Mr. Huebner: It may not. It may or it may not. In this case, I am not sure whether it would or would not. I am not predicating the whole case on

(Testimony of John N. Wolfram.)

the possibility that it would invalidate the whole patent.

The Court: Well, I don't want you to prematurely disclose what you are trying to get at, but I was just asking for information while he was busy.

Mr. Huebner: Shall I go into the explanation now?

The Court: No. Go ahead with your examination.

Q. (By Mr. Huebner): Have you finished that sketch?

A. Yes, I have completed a rough sketch.

Q. Would you put your initials on it, please?

A. Yes. (Witness complying.)

Mr. Huebner: Will you mark this sketch for identification, the sketch prepared by the witness?

The Clerk: Defendants' Exhibit A. [336]

(The sketch referred to was marked Defendants' Exhibit A for identification.)

Q. (By Mr. Huebner): Now, directing your attention to Defendants' Exhibit A, do I interpret this sketch that you have made to be a two-piece or three-piece fitting?

A. It is a three-piece fitting.

Q. And that is supposed to be what Mr. Parker meant in the paragraph that I quoted to you?

A. Well, that is what I interpret the paragraph to mean.

Q. Now, take the next sentence, if you please, in the patent, page 2, column 1, which reads as follows:

(Testimony of John N. Wolfram.)

“It is also obvious that minor changes in the details of construction and the shaping of the parts may be made without departing from the spirit of the invention as set forth in the appended claims.”

I would like you, and if the court prefers we don't take up his time while you are doing it, I am willing it be done at the next recess, but I would like you to take that sentence and in a free-hand sketch on the same kind of paper, which we will provide, illustrate as many **different forms** as occur to you as exemplifying the variations or the so-called minor changes in construction and shaping of parts as you feel come under this patent. I assume you have several in mind.

Mr. Freeman: I object to that question because it is [337] the duty of the court to determine what comes within or without the patent. We are talking here, your Honor, about a physical device in being, the patent claims as they are, a device corresponding to the drawings, to the description, and to the claims of the patent. That is what we charge. Of course, if he wants to delve into the realm of speculation as to what this patent may mean as to minor changes or what the attorney or Parker had in mind, I have no objection. I am satisfied this witness can take care of himself. But it is strictly speculative. I don't think we should take the court's time——

The Court: I don't know whether it is speculative or not, because there is a very important question in my mind. We have here a body that it

(Testimony of John N. Wolfram.)

has been admitted is in the public domain. We have a nut that is admitted to be in the public domain. We have a tube that is admitted to be in the public domain. We have a sleeve that is admitted to be in the public domain. The only thing you have done so far as I have been able to find out is to change the angle on the collar of the sleeve. You have changed the angle on the collar of the sleeve and you brought about a certain result. It is obvious that minor changes in the details of the construction and shape of the parts may be made without departing from the claims, and the only thing I am interested in is what you are going to do with the sleeve. [338]

Mr. Freeman: Well, it says, "without departing from the spirit of the invention as set forth in the appended claims." It is the claims that measure the invention.

The Court: If it wasn't for this sleeve, if we could take this sleeve out of the coupling entirely, that would be different, but on the face of the evidence, I would have to hold all the rest of these things are in the public domain from the testimony that has been introduced and the stipulations that have been entered into.

Mr. Freeman: As far as I am concerned, I will withdraw my objection, because this witness can take care of himself, and I will be very happy to have the court have full information. I am not trying to keep any information or any facts from the court.

The Court: I am not particularly interested as

(Testimony of John N. Wolfram.)

far as any changes you want to make on the body or the nut or the tube are concerned. I am interested in what changes you think can be made in the collar of the sleeve, and still be within the patent. The only thing you have done, as far as I know, is you have taken the sleeve and had a collar that was the same all the way around, and you changed the angle. The angle is such that nobody can tell it from looking at it with the naked eye. You have got to have an instrument to determine what the angle is. Now, you brought about certain changes by changing the angle of the collar of the sleeve. If [339] you can change the angle of the collar of the sleeve anyway you want to and still be within the patent, I would like to know it.

Can I ask counsel this question? Up until this particular patent, was there any attempt made to change the angle on the collar of the sleeve? [340]

Mr. Freeman: Are you directing that to plaintiff's counsel?

The Court: Both of you. I will ask you first.

Mr. Freeman: As far as we have been able to find from a very careful study of the prior art, the patents that they themselves here have dug up and put into this record, we fail to find any piece of prior art, whether it is patent, publication, or otherwise, wherein you have provided the clearance of the kind set forth in the Parker claim brought about by the angle on the sleeve which gives you expansion in one zone, gives you rigidity in another zone, and the detailed functions or structure set

(Testimony of John N. Wolfram.)

forth in the claims. The answer is we haven't been able to find it.

The Court: Now, let me ask opposing counsel.

Mr. Huebner: In Mr. Parker's earlier patent, 1,977,240, he illustrates in the drawing an angle of a little different character. That is the only one I recall at the moment. This earlier patent that I refer to would be prior art to the patent in suit. But now my question, your Honor, is a little bit broader than I feel you define. It isn't necessarily the angle on the sleeve itself which contributes the feature that they are talking about. It says that the parts are so shaped. Now, there may be an angle on the sleeve, or there might be an angle on the nut. In other words, I want this man to show what variations relate to this [341] so-called shaping of the parts whereby the result he talks about is achieved. Now, it may be that when he interprets it he will show us three or four different relationships whereby this clearance can be obtained, and that is what I feel he should do.

The Court: Well, as far as I can remember any testimony in this case, there is no claim made for any invention relative to the body or the nut. The only thing here is the shape of the sleeve.

Mr. Huebner: Well, there is more than that. As far as the physical exhibits go, I guess there is only one angle on a part that we are talking about, and that is the angle on the outside of the sleeve head. But the patent says that the parts may be so shaped that you get this clearance. Now, it may be that he

(Testimony of John N. Wolfram.)

will interpret that that angle has to be restricted solely to the sleeve. On the other hand, it may be that the angle can be on the nut, as far as the patent interpretation goes, and that may vitally affect the validity of the patent.

The Court: I have no objection to his answering the question and making drawings, but I was asking this for my own information in trying to clarify the issues here, because the only thing that I have been able to find and I may be mistaken, the only thing I have been able to find so far that is in any way new at all is the angle upon the collar of [342] the sleeve.

Mr. Huebner: I think that is the only thing that might possibly be construed so far as being different.

The Court: It may be that by cross-examination you will bring out that there is an angle in the nut that I don't know anything about, or there is an angle in the body. You might do that for me.

Mr. Huebner: That is what I would like to know, what the witness' interpretation of the patent is. He may decide that there could be an angle in the nut, instead of an angle on the sleeve, and get the same result, and there are half a dozen different ways that we can probably do this thing.

The Court: Supposing we do this, supposing during the recess time that he use his recess time to draw these diagrams.

Mr. Huebner: All right.

The Court: And if we have to take a little more

(Testimony of John N. Wolfram.)

time we will take a little more time on recess.

Mr. Huebner: All right.

Q. (By Mr. Huebner): While we are on the patent, just some general questions, then. That is Parker patent 2,212,183. Do you find in the patent any mention of the kind of metal that is recommended for making these fittings? I don't want to hold this proceeding up, but I haven't seen it, and I am just asking you if you have observed it. [343]

The Court: I thought it was stipulated whatever the fittings were made of didn't make any difference at all; whether they were made of aluminum, iron, or steel or gold, it didn't make any difference. They are not claiming that they have a right to manufacture fittings made only of aluminum or of an alloy.

Mr. Huebner: Or of lead, I presume?

The Court: Or of lead. I don't think there is any claim like that. Is there?

Mr. Freeman: Your Honor's statement of the stipulation is correct. Or, at least agreement of counsel.

Q. (By Mr. Huebner): Can we get this point into the record without reading the patent all over again, there is no mention of the kind of metal in the Parker patent, is there?

A. I don't recall that there is one, just offhand.

Q. All right. Are there any dimensions in inches or fraction of an inch of any of the parts recited or stated in the Parker patent?

A. I believe the only specific measurements that I recall are in regard to flare angles.

(Testimony of John N. Wolfram.)

Q. I will get to angles next; I am talking now about dimensions in inches or fractions of an inch, that is, the measurement of the parts; there is no reference to it, is there? [344]

A. There is no written reference, but of course the relationship of the parts is well disclosed in the drawing.

Q. That is, you mean to say the relative proportion of the parts is illustrated in the drawing, that's all?

The Court: My understanding of this fitting is that it works whether you have a fitting a quarter of an inch in diameter or six inches in diameter. What difference does it make?

Mr. Huebner: I just want him to confirm it. It is not a trick question. I want to lay a foundation here very quickly.

Q. (By Mr. Huebner): There aren't any measurements in the patent except measurements of angle, are there?

A. There aren't any specific dimensions mentioned in the specification. But, as I said, the relationship of the parts is disclosed in the figure, in the drawing.

Q. All right. Is there any recommended torque specified in the patent for the tightening up of the nuts?

A. I don't believe there is any specific figure given.

Q. Is there any reference to torque anywhere?

A. Not to a figure. Of course, the patent does

(Testimony of John N. Wolfram.)

mention that the fitting is to be drawn up or, as stated, it is clamp-set.

Q. Well, actually in practice if you embodied this disclosure in a physical structure, the recommended torque [345] would depend on a number of factors, wouldn't it? A. That's possible.

Q. If you had a small fitting your torque would normally be less than if you had a large size fitting, wouldn't it?

A. Generally, that might be the case.

Q. And if you had steel your torque would be greater than if you used aluminum in the threaded parts, wouldn't it?

A. I think that your tube would have something to do with that, too.

Q. Well, take a No. 8 fitting, and assume in one the parts are made of aluminum, and in the other the parts are made of steel; in which case would your torque be greater? That is, the recommended torque for tightening properly?

A. I think if you would use the same tubing, in either the steel fitting or the aluminum fitting you probably would use about the same torque.

Q. All right. If you use aluminum tubing in one and steel tubing in the other, what about the torque?

A. With everything else being equal, I would generally say that the steel should take a little bit more torque. [346]

Q. Now, on page 104 of the transcript, you testified the Parker Appliance Company was started

(Testimony of John N. Wolfram.)

by Mr. Parker in 1924. He was not the first one, to your knowledge, to manufacture tube fittings, was he?

Mr. Freeman: What page was that?

Mr. Huebner: 104.

Mr. Freeman: Well, that happens to be the testimony of Mr. Wagner.

Mr. Huebner: Yes. I did not mean to mislead him. I am sorry about that.

Q. It was testified on page 104 that the Parker Appliance Company was started by Arthur L. Parker in 1924. Were you with the company at that time? A. No.

Q. You have been with the company, I think you said, 18 years. A. Nearly 18 years.

Q. What is your age? A. 36.

Q. Then you were old enough in 1924 to have some knowledge, were you, of flared tube fittings?

The Court: I think it was stipulated flared tube fittings were manufactured and had been manufactured for years. The manufacture of the flared tube fittings is nothing new, is it? Wasn't that stipulated to? [347]

Mr. Freeman: There is no question about it.

Mr. Huebner: All right. The point I want to bring out, your Honor, is, and perhaps that is stipulated to, that flared tube fittings were used in automobiles and machinery long before Mr. Parker presumed to make any contribution to them.

The Court: Maybe counsel will stipulate to that. That is my understanding.

(Testimony of John N. Wolfram.)

Mr. Freeman: I think it is immaterial how far back they were made. I did say in my opening statement that prior to the Parker patent in suit, the Parker Company itself made fittings. There are some of those fittings here in evidence. I don't think it makes much difference whether it is 10 years back or 40 years back.

Mr. Huebner: He has been making the point that Mr. Parker was a pioneer and I want to show he was not a pioneer.

The Court: Can we do this? Can you enter into a stipulation that this business of having flared fittings is nothing new, that it has been used for years, and it is used in all kinds of equipment?

Mr. Huebner: I think that stipulation is correct as to the fact.

The Court: I did not understand anybody said Mr. Parker was the inventor of the flared tube fitting.

Mr. Huebner: But they said he was a pioneer in this business. [348]

Mr. Freeman: Then I am going to object to the question from this witness on the ground it is not proper cross-examination.

The Court: I will sustain the objection. I don't think it is material. As far as I am concerned, it is not. It may be material for you in establishing your record, and I am very conscious of the fact that I don't consider this court as the court of final resort in this case at all, that you want to make a

(Testimony of John N. Wolfram.)

record and so I will lean over backwards to allow you to make a record. But I think it has already been agreed this is nothing new. Fittings have been made for years. I also remember you told us at the beginning of the case you were going to introduce a book, I think, published in 1902, depicting a flared fitting.

Mr. Huebner: Yes, and a patent granted in 1865.

The Court: So even though this witness can't testify from his own knowledge, at least it is the understanding of the court this is not anything new.

Q. (By Mr. Huebner): Do you know when the AN standard was adopted?

A. You mean the AN standard for flared fittings as presently constituted?

Q. The AN standard as originally constituted.

A. What is now referred to as the AN standard flared fitting was officially approved about in 1941. [349]

Q. And there have been changes made since that time?

A. There have been minor changes listed on the standard sheets which set forth these fittings.

Q. Do any of those changes go to the degree of angle authorized to be incorporated in the sleeve head?

A. Do you mean on the outside of the sleeve head?

Q. Either outside or inside. I want you to recite the facts.

(Testimony of John N. Wolfram.)

A. As far as I know, I don't recall any changes in the angles of the sleeve head. There may have been some changes that I don't know about, but my impression is that there have not been any.

Q. Did you personally have something to do with the activities in connection with the development of the AN standard in 1941?

A. I don't know how broadly you mean to ask your question. I did some work on the problem at the Parker Appliance Company, but that was not of an official character or relation with the Army and Navy.

Q. Did you have anything to do with the preparation of the patent application of the Parker patent in suit?

A. Yes, I did in the latter part of the prosecution.

Q. What were your activities in that connection?

A. I transmitted some of the information and comments [350] from Mr. Parker to the patent attorney.

Q. Do you recall what the facts were that you transmitted?

A. Well, this is one of the very first patent applications which I had anything to do with. Prior to that time, I had never worked upon patents. I believe that when I got into this case, claim 1 had been allowed and that we were—or I should say that the attorney was working on claims 2 and 3.

(Testimony of John N. Wolfram.)

Q. Well, then, your work would relate, you think, only to claims 2 and 3?

A. Yes, I think that is the case. It has been quite a long time ago.

Q. Now, during the war, I believe it was stated that you had five or six engineers working in the research department on flared tube fittings. Is that right?

A. That is correct.

Q. Then after the war, you tapered off so it was a very small department, if any, is that right?

A. Yes. As I indicated, at the end of the war, we tapered off, that was in August of 1945, and then about a year later or so, I myself got out of that phase of the engineering.

Q. Now, the patent in suit was granted August 20, 1940. Therefore, I presume that its subject matter was known [351] to your research department in 1941 when the AN standard was being developed.

A. We didn't have a research department of the nature which I have mentioned in 1941 or 1940.

Q. Do you have any knowledge as to whether this Parker patent was made known to the committee, or whoever it was working on the AN standard program?

A. No, I don't know whether this patent was specifically called to their attention.

Q. Do you have any knowledge as to where the dimensions, proportions, and angles for the AN standard fitting came from?

A. I have just a general idea. As I said, I did

(Testimony of John N. Wolfram.)

not work directly with the Army and Navy on that project, but from some of the contacts that some of our people had, I picked up bits of information here and there.

Q. What were those bits of information?

A. Well, it is my understanding that——

Mr. Freeman: I object to that as strictly calling for hearsay. There isn't any question but what this patent issued on the date that appears on the patent. It was then general public information and anybody that wanted it could have gotten a copy of it. There isn't any question about it. He is calling for events that took place in 1941, which are subsequent to the issue date of the patent. [352]

Mr. Huebner: How can he object that it is hearsay? I am cross-examining.

Mr. Freeman: It still can be hearsay.

The Court: It is true you have a great deal of latitude in cross-examination, but he has testified he doesn't know whether the people who adopted AN specifications looked at this patent. That is my recollection of his testimony.

Isn't that what you said?

The Witness: That is correct, your Honor.

Mr. Huebner: But he had some sources of information, your Honor, and I wonder what they were.

Mr. Freeman: That is strictly hearsay.

The Court: He says he doesn't know and, when he says he doesn't know, I don't know that you

(Testimony of John N. Wolfram.)

can ask him what somebody told him. I will sustain the objection. I am assuming now that the people who drew up the specifications of the AN fitting knew about this patent and probably saw the patent. I don't know.

Mr. Huebner: Your Honor, I don't know what the basis for that assumption may be. That is why I am asking this question of the witness.

The Court: The reason I say I assume that is because my understanding is the so-called AN specifications follow this fitting here. [353]

Mr. Huebner: You mean follow the patent or follow the fitting? Your Honor has a physical exhibit in your hand. The AN specifications were employed in making the Parker fitting, but we still haven't come to the proof where we will show that the AN fitting is not according to the Parker patent.

The Court: Well, then, the committee or the group that decided upon the specifications of the fitting, developed the specifications for a physical fitting, and not for a patent.

Mr. Huebner: Then it becomes pertinent as to what was the source of their information. Did they adopt it from the patent or did they adopt it from the thin air?

The Court: If this witness knows, he can answer, but he has testified he doesn't know. [354]

Mr. Huebner: And my question based on what other sources of knowledge he may have, then, is refused?

(Testimony of John N. Wolfram.)

The Court: Yes. I think it is entirely useless.

Q. (By Mr. Huebner): During the war period you had five or six engineers; when the war was over you cut that down. What was the reason for trimming the department, the research department?

A. I think the main reason was lack of business. I believe that practically all of our orders were canceled off the books.

Q. Was it the principal duty of these five or six engineers during the war period to translate this patent in suit into the AN fitting, is that what they were doing? A. No.

Q. What problems were they working on?

A. They were working mostly on practical problems which came up with different situations in the war. As for example when they shoot into an airplane and break tubing lines, and they want a quick-fix fitting to patch up the broken tube right there in the ship, problems of that nature.

Q. You are familiar, I assume with the AC-811 fitting? A. I am familiar with that, yes.

Q. That is exemplified, is it not, in Exhibits 23 and 24? Will you step down, please, and pick out from the physical exhibits any which exemplify the AC-811? [355]

(Witness does as requested.)

Q. Thank you. Exhibit 23 is a three-piece assembly, is it not, without any cut-away parts?

A. That is correct.

(Testimony of John N. Wolfram.)

Q. And the other one, Exhibit 24, is a similar assembly which has been screwed together and cut away in part? A. That is correct.

Q. What torque wrench was applied to Exhibit 24 in tightening it, what wrench torque?

A. I don't recall the exact figure now, but it was the normal torque which was to be applied to this fitting.

Q. How are you able, apart from the fact that they are marked as exhibits, how are you able to identify them as AC-811 fittings?

A. Well, I can tell generally from the appearance of the fittings, because I have handled AC-811 fittings many times before. And, furthermore, I got these fittings out of stock at our company. That is, I had them gotten out of stock.

Q. As they are in your hands today, what are the distinguishing features, if any, by which you are able to say, independently of where you got them, that these are AC-811 fittings?

A. Well, as I said, I can tell from the general appearance, [356] the gray color which is anodic treatment which we put on the 811 fittings, and the appearance of the nut, that is, the shorter relative appearance than the AN nut, and the slight shoulder on the nose of the body, for example.

Q. If they didn't have that characteristic color, those parts didn't have that color, and you were shown Exhibits 23 and 24 alongside of, let's say, similar size and type AN fittings which were col-

(Testimony of John N. Wolfram.)

ored the same, you wouldn't be able to tell them apart, would you?

A. If the fittings were made known to me that they are AN and 811, but it was not pointed out which was which, I would be able to tell them, yes.

Q. How would you be able to tell them apart?

A. As I mentioned before, the body, for example, has a small shoulder just before the thread, and I can recognize the angle of the body in this fitting as being somewhat steeper than the AN fitting angle is.

Q. Angle of what part?

A. The angle of the body.

Q. Of the body? A. Yes.

Q. By the angle of the body you mean the tapered point at the nose against which the inside of the flared tube fits? A. That's correct.

Q. This Parker AC-811, whichever you want to call [357] it—I guess we had better identify it specifically as the AC-811 manufactured by Mr. Parker and others—that was in general use in 1935, wasn't it?

A. Yes, the AC-811 fitting was in general use in 1935.

Q. By general use I mean they had been manufactured by the thousands at the time and immediately subsequent thereto.

A. I think that is a fair statement.

Q. Was this AC-811 the first of the Parker manufactured triple type fittings?

A. Yes, the AC-811 was the fitting which Mr.

(Testimony of John N. Wolfram.)

Parker's designation for it was the triple fitting.

Q. Is that AC-811 fitting exemplified, in so far as you know, in any Parker patent?

A. Well, I believe the original AC-811 was exemplified in the Parker patent 1,893,442.

The Court: Can I ask the witness a question? What is the difference between the AC-811 and the AN fitting?

The Witness: There are a number of minor differences, your Honor. In some of the small size 811 fittings, for example, the thread pitch, the number of threads per inch, is a little different, and the particular angle of the body seat, the beveled surface, is a little different. And I believe the length of the thread is a little different. [358]

The Court: You don't claim any patent because of the thread, do you, the length of the thread, or the number of times the nut has to go around in order to be tightened up?

The Witness: I don't believe that is a part of the present patent, no.

The Court: Substantially, then, the AC-811 is about the same as the AN fitting, is that correct?

The Witness: The present 811 fitting might be said to be that, yes.

The Court: We are talking about the 811 fitting that was made way back in 19—what did you say?

The Witness: '35.

The Court: 1935.

The Witness: There have been a few changes made in the '811 fitting since that date.

(Testimony of John N. Wolfram.)

The Court: Substantial changes?

The Witness: Yes, substantial as to principle.

The Court: What?

The Witness: Well, for example, the sleeve head angle has been incorporated.

The Court: Has been what?

The Witness: It has been placed or incorporated upon the 811 fitting, since 1935.

The Court: The original 811 didn't have that angle?

The Witness: That's correct. [359]

The Court: Any other thing?

The Witness: Yes. In some of the small-size sleeves the inside flare angle has been cut back steeper than it had been.

The Court: On the sleeve?

The Witness: The inside flare angle of the sleeve, yes.

The Court: In the original AC-811, was there any angle to the collar of the sleeve?

The Witness: On the outside surface of the head, do you mean?

The Court: Yes.

The Witness: No, there was no angle on that surface.

The Court: Excuse me for interrupting?

Mr. Huebner: That is all right, your Honor, those are pertinent questions.

Q. (By Mr. Huebner): The AC-811 examples which you have before you, Exhibits 23 and 24, when were they manufactured?

(Testimony of John N. Wolfram.)

A. The nuts and bodies were taken out of our regular stock. I do not know the exact date of manufacture. The sleeves were made up several months ago.

Q. Do those particular specimens embody any sleeve-head angle, that is to say, an angle on the outside of the sleeve? A. No.

Q. In other words, the outside of the sleeve head in [360] those particular specimens was truly cylindrical to start with, is that right?

A. The drawings which they are made from showed the sleeve head as being cylindrical. I did not specifically check them to see whether they came out perfectly cylindrical.

Q. Anyway, after they are tightened up that way, as in Exhibit—which one of them is tightened up and cut away? A. 24.

Q. Yes, 24, when it is tightened up and cut away that way, you can't tell by visual inspection whether there was originally a sleeve head angle or not, can you? A. No, not very well.

Q. Is it true that all AC-811 fittings, which have been supplied by anyone to the government, would have to be made and pass inspection as being made under the AC-811 government specifications?

A. I presume so. [361]

Q. And in that respect, if they were made within the past few years, they would correspond to the physical specimens in your hand, Exhibits 23 and 24, is that right? A. No.

Q. Well, then, will you clarify the facts?

(Testimony of John N. Wolfram.)

A. As I mentioned before, the 811 parts, as they were made in 1935, did not have a sleeve head angle and that angle has been incorporated into the specifications, and these samples, Exhibits 23 and 24, do not have the sleeve head angle.

Q. Now, will you pick out from the exhibits on the table examples of Masters and Collins assemblies of parts which make up so-called fittings, and which typify or embody in your opinion the Parker patent 2,212,183.

The Court: May I see those exhibits before they are lost among the pile there?

The Witness: Yes, your Honor.

Mr. Freeman: I am wondering if I might inject myself just one moment. When you are talking about AC-811, are you talking about it prior to 1940 or subsequent to 1940?

Mr. Huebner: I am not talking about it. I am leaving it up to the witness. If you want to clarify it, and there is something to be clarified, Mr. Freeman, that is quite all right.

Q. Now, you have selected from the exhibits, Plaintiff's [362] Exhibits 8, 6, 10, 9, 5, 11, and 7, is that correct?

A. I didn't follow the exhibit numbers.

Q. I say you have selected from the exhibits the following, and I identify them by exhibit number, and asked you if that was correct.

A. I didn't follow you as you read the exhibit numbers but I assume you read the correct ones.

Q. Now, pick out a cut-away example of a Masters fitting, or a Masters assembly.

(Testimony of John N. Wolfram.)

A. (Witness complying.)

Q. Will you identify it by exhibit number?

A. Plaintiff's Exhibit No. 8.

Q. Now, will you please state how you are able to identify that, forgetting about the exhibit tag attached; how can you identify that as a Masters fitting or a Masters assembly of parts?

The Court: I understood it was stipulated the other day that it couldn't be told where these fittings came from after they were delivered and put into a bin, that it didn't make any difference, they were all made to a certain standard, they were interchangeable, and nobody could tell by looking at the fitting itself where it came from.

Mr. Huebner: Except by the name or trademark that might be on the outside.

The Court: That's right. If there was some designation, [363] then somebody could tell whether it came from Masters or Collins or Parker, but if there was no designation and you put the three of them in a bin together, an expert couldn't tell them apart. That was the stipulation.

Mr. Huebner: I know it, your Honor, but I wanted to ask this witness, and I won't prolong this particular line of questioning, but is there any physical thing about that fitting which enables him to say it is a Masters fitting.

The Witness: Well, other than from the fact that I recognize this fitting as one that had been produced at the deposition and properly tagged ever

(Testimony of John N. Wolfram.)

since that time, the body has a trade-mark on it, IWM.

Q. (By Mr. Huebner): You can't tell from looking at it whether it had a flare or, rather, an angle on the head of the sleeve to begin with or not, can you? A. Yes, I think you can.

Q. How?

A. The angle still appears to be there.

Q. Did you tighten that one up?

A. Yes, I did.

Q. What wrench torque?

A. The normal wrench torque for this size and material fitting, which is 200 inch pounds.

Q. In that particular specimen, you say you observe an angle. By that, I presume you also observe a clearance between [364] the outside of the sleeve head and the inside of the nut.

A. Yes, there is a clearance at the lower end of the sleeve that you can see.

Q. The clearance in that particular specimen goes all the way up to the shoulder of the nut, doesn't it?

A. Well, no. On the one side, it shows it clearly in contact; on the other side, it gets very close, and it is pretty hard to say it goes all the way up.

The Court: While you are looking up your record, I think it is time to take our morning recess. The witness will remember about preparing the diagram.

Mr. Freeman: Could we have an extra five min-

(Testimony of John N. Wolfram.)

utes? I think the witness has some other things he would like to take care of, too.

The Court: All right. We will recess until 20 minutes after 11:00.

(Recess.) [365]

Q. (By Mr. Huebner): Mr. Wolfram, were you able to complete the sketches which were requested?

A. Yes, I made a number of sketches.

Q. You have handed me two sheets of paper. Will you put your initials on both of them, please?

A. (Witness does as requested.)

Mr. Freeman: You will provide us with photostatic copies?

Mr. Huebner: I was going to ask the court's permission to withdraw them after they were offered, so that we may make photostatic copies.

The Court: I have no objection.

Mr. Huebner: I would like to have these marked for identification as Defendants' exhibits.

The Clerk: B and C.

(The sketches referred to were marked Defendants' Exhibits B and C, for identification.)

Mr. Freeman: If you are going to offer them, you can offer them now. We have no objection.

Mr. Huebner: A was offered in evidence, I think.

(Testimony of John N. Wolfram.)

The Court: No; I think it was only for identification.

Mr. Huebner: I will ask some questions first, your Honor, before I offer them.

Q. (By Mr. Huebner): Mr. Wolfram, will you take these exhibits B and C, for identification, and go through the [366] figures which you have therein made, mark them by figure number, and describe what each one of those figures represents.

Mr. Freeman: Does your Honor have any objection to my standing alongside of the witness so that I may likewise see him?

The Court: We will all look over his shoulder, all except the reporters.

The Witness: Would you prefer this to be No. 6, or shall I start again with 1?

Mr. Huebner: It doesn't matter. Make them in consecutive order.

(Witness does as requested.)

Q. (By Mr. Huebner): Now, tell the court what each figure is.

A. In Figure 1 I have showed a slightly different shaping of the sleeve with a two-part angle or a double angle on the inside surface of the sleeve. The sketch is so labeled.

In Figure 2 I showed the reversal of the parts in which the nut has the external thread and the body has the internal thread.

Q. The same as in Exhibit A for identification?

A. Substantially the same, correct.

In Figure 3 I have indicated that the flare angle

(Testimony of John N. Wolfram.)

on the [367] body, and consequently on the tube itself, may be varied.

In Figure 4 I have indicated that the transverse shoulder on the sleeve and on the nut may be at a slight angle instead of straight across as shown in the patent.

In Figure 5 I have indicated that the body may have a small step or shoulder between the bevel and the thread of the body.

In Figure 6 I have indicated that the body may be formed with two angles instead of a single angle.

Q. Now, in these Figures 1 to 6, both inclusive, are the parts intended to be illustrated in finger tight condition or in normally wrench tightened condition?

A. Finger tight position.

Q. All right. Now, Figure 1, then, when parts there are wrench tightened to the proper torque, indicate to the court what the approximate position of the parts will be.

Mr. Freeman: Do you mean by dotted line?

Mr. Huebner: By red pencil, if you have one. If not, we will get one.

The Court: I have a red pencil.

The Witness: Thank you, your Honor.

(Witness does as requested.) [368]

Q. (By Mr. Huebner): Now, for the record, you have drawn in red pencil a modification whereby the head of the sleeve is shown to be in more intimate contact with the outside of the tube

(Testimony of John N. Wolfram.)

flare, is that right? A. That is correct.

Q. And, also, the head of the sleeve has advanced somewhat downwardly longitudinally of the flare. A. That is correct.

Q. And, also, you have shown the sleeve head expanded radially slightly, is that right?

A. That is correct.

Q. You haven't shown any difference in the relative position of what I will call the corner of the sleeve head to the inside of the nut; is that correct? In other words, there has been no change in the relationship between the outside of the sleeve head and the inside of the nut in the region of the corner of the shoulder, is that right?

A. No. I didn't draw the pencil line up quite that far, but I shall. That is a very close corner up there and I will just continue the line up as best I can.

Q. Is it your intention to illustrate the outside of the—the radially outside surface of the sleeve head and the inside adjacent surface of the nut as touching in this region of the shoulder?

A. Yes. There will be a limited amount of expansion [369] right at the corner of the sleeve head shoulder and touching will occur some place in that corner.

Mr. Freeman: Could he mark that corner?

Q. (By Mr. Huebner): Will you mark the corner with the letter C, meaning corner, and draw a lead line to it? A. (Witness complying.)

Q. You have written the word "Corner" in red

(Testimony of John N. Wolfram.)

pencil and drawn a lead line to the corner, right?

A. That is correct.

Q. Is it your interpretation of the patent that Fig. 1 would still be illustrative of the patent structure if there were a clearance between the inside of the nut and the outside of the sleeve at the region of the corner, but extending outwardly from it?

A. Well, I have illustrated these parts so shaped that when the sleeve head expands, it would contact in the region of the corner.

Q. In your illustrations here, then, Figs. 1 to 6, both inclusive, it will always contact on the radial surface in the region of the corner, is that what you mean?

A. Yes. It may contact on this radius of the nut. The nut is often formed with a small radius at that point, but it will have contact somewhere in this region.

Q. While we are talking about the nut, assume Fig. 1, as you have illustrated it, but assume an actual clearance [370] between the outside of the sleeve head and the inside of the nut on the entire outside surface up to the corner. Would that be within the teaching of the patent?

A. On the outside of the sleeve head and the inside wall of the nut up to the corner?

Q. Yes. If there was a clearance all the way up there, would that be within the teaching of the patent?

A. No. If the clearance goes up to the corner,

(Testimony of John N. Wolfram.)

but then disappears in the corner, that is within the teaching of the patent.

Q. But it would be outside the scope of the patent, then, in your opinion, if the clearance went all the way up to the corner, is that right?

A. No. I believe what I said was that if the clearance goes all the way up, but then disappears at the corner, then it would be within the patent.

Q. In other words, there is no clearance from the corner down?

A. From the corner down, that is correct.

Q. And if there is no clearance from the corner down, that still would be within the teaching of the patent? That is what I want to get clear one way or the other. I will say it again. I will clarify it.

If there is a clearance all the way from the corner in Fig. 1 down to the end of the sleeve head, would it be within [371] the teaching of the patent?

A. It would be within the teaching of the patent when you are speaking of the portion of the sleeve head below the corner, and there is contact at the corner.

Q. Let's assume then, as you say, contact at the corner, but no contact at all below the corner; in other words, there is, let us say, a point contact so far as the outer wall is concerned—

A. Well, I think if there is a small amount of side wall contact in the region of the corner here on the side wall and extending down from the corner a short distance, and then was spaced away

(Testimony of John N. Wolfram.)

from the—or there was a clearance between the two from there on down, that would be within the teaching of the patent.

Q. All right. Take your language, the region of the corner. Will you draw a circle in red illustrating what you mean by the region of the corner?

A. (Witness complying.)

Q. Will you mark that region of the corner, please? A. (Witness complying.)

Q. Now, I call your attention to the fact that you have drawn this circle so that it includes about 25 per cent of the length of the outer wall of the sleeve head. That was what you intended?

A. I did not mean to chop it off at a specific per [372] cent, but it is generally in that vicinity which you would call the region of the corner.

Q. All right. Then it is your understanding that the patent requires that there be contact between the outer wall of the sleeve head and the inner wall of the nut throughout that area which you have drawn, indicated by a circle and called region of the corner, is that right?

A. No, not at all. As long as you have contact at some point within the region of the corner, not throughout the region of the corner. [373]

Q. Well, where is the contact absolutely necessary in order to follow the patent?

A. Well, I think from the terms that we have used here, the contact is necessary at some point within the region of the corner.

Q. Well, suppose you had no contact between,

(Testimony of John N. Wolfram.)

let us call them the horizontal surfaces, which means the shoulder surface, the horizontal shoulder surface of the sleeve, and the corresponding shoulder of the nut, if you have no contact there it wouldn't work, would it?

A. No, not in this form.

Q. Well, you have to have that contact in order to push the sleeve head on, don't you?

A. That's correct.

Q. So that is necessary, isn't it?

A. Yes.

Q. Now, is it necessary under the teaching of the patent that there be a contact on the radial, that is, the external radial circumferential surface of the sleeve head with the inside of the nut?

A. Yes, I think there should be a point of radial contact within that region.

Q. Again in order to comply with the patent it is your feeling, then, that that point of radial contact should really extend from the corner down to about where your circle draws [374] a line across?

A. No, it need not necessarily extend that far, just as long as there is some point within that region that is in contact.

Q. That is some point within the region on the circumferential surface, that is your point, is it?

A. Yes, that is a fair statement.

Q. In none of these sketches have you shown as a possible modification a relief in the nut instead of taper on the sleeve. Do you mean the court to infer that if the nut were relieved instead of taper-

(Testimony of John N. Wolfram.)

from the—or there was a clearance between the two from there on down, that would be within the teaching of the patent.

Q. All right. Take your language, the region of the corner. Will you draw a circle in red illustrating what you mean by the region of the corner?

A. (Witness complying.)

Q. Will you mark that region of the corner, please? A. (Witness complying.)

Q. Now, I call your attention to the fact that you have drawn this circle so that it includes about 25 per cent of the length of the outer wall of the sleeve head. That was what you intended?

A. I did not mean to chop it off at a specific per [372] cent, but it is generally in that vicinity which you would call the region of the corner.

Q. All right. Then it is your understanding that the patent requires that there be contact between the outer wall of the sleeve head and the inner wall of the nut throughout that area which you have drawn, indicated by a circle and called region of the corner, is that right?

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(Testimony of John N. Wolfram.)

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Q. That is some point within the region on the circumferential surface, that is your point, is it?

A. Yes, that is a fair statement.

Q. In none of these sketches have you shown as a possible modification a relief in the nut instead of taper on the sleeve. Do you mean the court to infer that if the nut were relieved instead of taper-

(Testimony of John N. Wolfram.)

ing the sleeve it would be outside the scope of the patent? A. No, I don't mean to infer that.

Q. That would be another illustration of the expression "so shaped," wouldn't it?

A. I think if you took the specific structure that you had in mind, that you could read the claim upon it.

Q. Will you very quickly draw one figure and number it 7 and illustrate a substitute form wherein the relief necessary is in the nut rather than on the sleeve head?

Does it make you nervous if we watch you draw?

A. No, sir, not at all.

Q. All right.

(Witness sketching on paper.)

Q. Would you label it Figure 7, please? [375]

Now, you have added Figure 7, Mr. Wolfram, to Exhibit C, for identification?

A. That is correct.

Q. In Figure 7 you have illustrated the head of the sleeve as being truly cylindrical on the outside, haven't you? A. Yes.

Q. And you have shown the relief desired by making a conical recess, or, let us say, a tapered recess, on the interior wall of the nut?

A. That is correct.

Q. And in your opinion that modification would follow the teaching of the patent and be within the spirit of it?

A. Not reading the claims very carefully right now, I think that would.

(Testimony of John N. Wolfram.)

Q. One other possible modification I would like to ask about. Supposing instead of making the inside of the nut tapered like that you were to draw a straight interior with a little shoulder on the inside of the nut, that would also be a possible modification, wouldn't it? A. I think it would.

Q. Just illustrate that to show that form, will you, and mark it Figure 8?

A. I might say that I neglected to put the tube in Figure 7. [376]

Q. Now, will you label that Figure 8, please, and hold it up for the court to see?

(Witness does as requested.)

Q. You have drawn Figure 8 on Exhibit C, for identification? A. That is correct.

Q. And that Figure 8 illustrates another modification such as you conceive to be within the scope of the patent in suit?

A. Yes. I haven't thought of that before, but I think that the claim would probably read on that.

Q. Now, supposing we go one step further and we don't use any external angle on the sleeve head, nor any angle or particular recess on the inside of the nut, but we provided a clearance between the outside of the sleeve head and the inside of the nut, which is represented by parallel walls, would that be within the teaching of the patent? So that you can think about that more clearly, perhaps it would be wise if you made a sketch illustrating that conception and we can talk from the sketch.

(Testimony of John N. Wolfram.)

Mr. Freeman: Why don't you give him a drawing of that and we will save time?

Q. (By Mr. Huebner): I will show him a rough sketch that I made so he can readily see what I am talking about. In other words, you have the outside of the sleeve head and [377] the inside of the nut both truly cylindrical and parallel, but spaced far enough apart to give you the desired clearance.

A. No, I don't think that would come within the scope of the patent as you have it drawn.

Q. Or as I have described it, because that is what is in the record? A. Yes.

Q. I believe you said, or somebody said during the course of these proceedings that hoop tension was an important functional result when the parts are put together; do you recall that? A. Yes.

Q. Now, hoop tension is your expression, or perhaps industry's expression, for the tension that is exerted by the metal employed in the sleeve that goes in the fitting, the tendency of the metal to return to its original cold form, is that right?

A. The latter part of your statement is correct.

Q. And all metal has some elasticity, doesn't it?

A. Yes. [378]

Q. Now, referring to Exhibit 24, which is a cut-away of a Parker 811 fitting, when those parts are tightened up wrench tight, as illustrated in that cut-away, there will be hoop tension present, will there not?

A. There will be tension in the head of the

(Testimony of John N. Wolfram.)

sleeve, but it won't be the same as in the Parker patent.

Q. Will you explain that difference to the court?

A. Well, in the Parker patent, when the lower end of the sleeve head expands and does not go into contact with the wall of the nut, there is a sort of a free end there, you might say, whereas in this case the head of the sleeve is expanded, but it is wedged out against the wall of the nut.

Q. In other words, in the exhibit in your hand, in addition to hoop tension, there is also a pressure concentrating on the axis imposed by the nut, isn't there? A. That is correct.

Q. So that we have two forces in that one. We have hoop tension, plus concentration in force of the nut, that is right, isn't it?

A. That's right.

Q. In the Parker patent, the theory is to utilize only hoop tension and not utilize concentration pressure by the nut?

A. The hoop tension at the lower end of the sleeve, that is correct. [379]

Mr. Huebner: I would like to have marked for identification a sheet of paper on which there is the legend, "Fig. 86."

The Clerk: Exhibit D for identification.

(The document referred to was marked Defendants' Exhibit D for identification.)

Mr. Freeman: If you are going to ask this witness to identify and describe one of your prior art

(Testimony of John N. Wolfram.)

publications, then I am going to object to it on the basis that it is improper cross-examination. If you are using it to test this man's ability to testify here, then I have no objection. I want you to limit your questioning of this witness to the latter phase, that is, testing his ability.

Mr. Huebner: I haven't asked any question yet.

Mr. Freeman: I happen to know the photostat that you have there, and I am just making that suggestion.

The Court: Of course, I don't have the prior experience and the prior knowledge of counsel, so I have no idea what is going to be introduced. Of course, there is no question before the court, there is no objection before the court, and there is nothing before the court at this time in regard to this exhibit.

Mr. Freeman: Except my admonishment to counsel.

The Court: Which counsel may or may not pay heed to.

Q. (By Mr. Huebner): Mr. Wolfram, I show you Exhibit [380] D for identification, which is a photostat of something under which is the figure 86. The photostat has been colored so that apparently certain parts appear in different colors. Will you look at that? Now, as a draftsman and one experienced in this field, does that mean anything to you?

A. Yes. This is a quarter section of a three-piece fitting.

(Testimony of John N. Wolfram.)

Q. Will you identify the parts and with red pencil write your identification on that sheet?

A. You wish to have the names of the parts?

Q. The names of the parts.

The Court: Maybe he'd better have a black pencil.

Q. (By Mr. Huebner): Try this ball point pen.

A. I will use this one.

Q. In green ink, which finally wrote on the surface, you have written the word "nut" and drawn a line to the blue part.

A. That is correct.

Q. Element C, is that right?

A. That is correct.

Q. And you have written the word "body" and taken the lead line over to the green part, which is Element A, and you have called that the body?

A. That is correct.

Q. Now you have written the word "sleeve" and drawn a [381] lead line to the part marked in reddish-orange color, which is D on the sketch.

A. That is correct.

Q. And you have written the word "pipe" and drawn a lead line to the part shaded in yellow, marked B, is that right?

A. That is correct.

Q. Why did you use the word "pipe" instead of "tube" at that point?

A. Well, I kind of recognize this figure and I happen to know that it is for lead pipe.

Q. Let's confine it to the drawing now. Can you tell from the drawing itself whether it is lead pipe or steel pipe or any other kind of metal?

(Testimony of John N. Wolfram.)

A. No, but I suspect it would be a soft metal because of the thickness of the pipe.

Q. You consider this illustration to show an undue thickness of pipe?

A. Yes, I think it is thicker than you ordinarily use with flared fittings.

Q. Now, are these parts in Exhibit D for identification assembled? A. Yes, they are.

Q. Do you find that this sleeve has a clearance on the outside between it and the nut? [382]

A. Yes, there is clearance between the sleeve head and the nut extending along the entire length of the sleeve.

Q. Have you any means, by inspecting that drawing, and without reference to any printed data, of determining what size fitting, if any, this might be limited to?

A. Do you refer to the diameter of the pipe?

Q. Well, the fitting itself. Is there anything about that picture, D for identification, that in your mind confines it to a size 2 or a size 32, or any other size? A. No, not directly.

Q. The same parts, then, as illustrated there could be employed in a small fitting or a large fitting? A. I presume so. [383]

Q. In the normal tightening of a fitting, such as illustrated in Exhibit D, there would be hoop tension present, would there not, after the device was wrench tight?

(Testimony of John N. Wolfram.)

A. Well, that would depend upon whether or not the sleeve head expanded.

Q. Well, suppose the sleeve head expanded, that is, the part in reddish-orange here, isn't it, suppose it did expand?

A. The head part is the part that is enlarged and is against the flare of the tube.

Q. Well, now, there would still be hoop tension, even if the head came out and touched against the inside of the nut, wouldn't there?

A. Yes, there would, if the sleeve head expanded there would be hoop tension.

Q. And there would also be present a clearance, would there not, in the normal use of a fitting such as illustrated in Exhibit D, even after tightening so that the outside of the sleeve head would not actually contact the inside of the nut?

A. Well, that would depend on the specific proportions of the fitting which you drew up.

Q. Well, with your knowledge of the proportions that are ordinarily used in fittings of this type, doesn't that space that is shown here in the drawing between the outside [384] of the sleeve head and the inside of the nut, indicate that there would always be a clearance even after tightening?

A. Well, I am not sure that there would, even though it looks like a large clearance. If you made the parts out of soft materials, you could expand the sleeve considerably.

Q. You will notice that the space illustrated is almost half as great in cross-sectional distance as

(Testimony of John N. Wolfram.)

the shoulder between the nut and the sleeve-head, is that correct?

A. It appears to be about a third to one-half.

Q. Isn't a third to one-half open space like that, a third to one-half as much as the contacting area between sleeve head and nut, sufficient, in the physical fittings that are before us here, to always provide a clearance after tightening?

A. I don't think you can make a categorical statement that way, because the relation of the sleeve head to the nut and the amount the sleeve head expands doesn't depend upon what the shoulder contact is between the nut and the sleeve.

Q. Isn't it apparent to you from inspection of the drawing itself, and not from anything that has been said, that the draftsman or conceiver of this particular thing illustrated in Exhibit D, intended to enlarge the interior of the nut so there would be a clearance? [385]

A. There is a clearance for that position of the fittings, yes.

Q. And the clearance that is shown there requires a special machining operation, doesn't it?

A. Yes, it is an undercut.

Q. That is what I wanted to bring out. And will you mark the word "Undercut" and draw a lead line to it and show it to the court?

(Witness does as requested.)

Q. So that we can explain it a little further, I call your attention to the threads. In the ordinary job the interior of the nut would have had a di-

(Testimony of John N. Wolfram.)

ameter which was a continuation of the peak of the threads, wouldn't it?

A. Of the root diameter of the thread, small diameter.

Q. And therefore there would have been a small diameter running right up and down as I am indicating with the pencil? A. That is correct.

Q. So that what you call the undercut was an additional machining operation to provide a larger internal diameter, and, consequently, a clearance?

A. That is correct.

The Court: Well, I notice it is 12:00 o'clock. I don't anticipate that you are going to finish this witness in the next few minutes.

Mr. Huebner: I doubt it, your Honor. [386]

The Court: So I think we will take our noon recess at this time. We will recess until 2:00 o'clock this afternoon.

(Whereupon, at 12:00 o'clock noon, a recess was taken until 2:00 o'clock p.m. of the same day.) [387]

Los Angeles, California, June 20, 1950,
2:00 o'clock, P.M.

JOHN N. WOLFRAM

the witness on the stand at the time of recess, having been heretobefore duly sworn, resumed the stand and testified further as follows:

(Testimony of John N. Wolfram.)

Cross-Examination
(Continued)

By Mr. Huebner:

Q. Mr. Wolfram, referring to the modification of the patent in suit, which you suggested in Exhibits B and C for identification, is it possible that there might be one other? For example, where the head of the sleeve is concave so that there would be sufficient clearance between the head of the sleeve and the interior of the nut?

A. Not the way you have it sketched there.

Q. Well, will you make a sketch of what might be interpreted as coming within the scope of the patent, having that possible modification in mind?

A. That is a conical surface on the sleeve head?

Q. A cut-out section on the sleeve head.

A. All right. (Witness complying.)

Q. Will you initial that sheet, please, and mark the sketch figure 9?

A. (Witness complying.)

Mr. Huebner: I will ask that this be marked for identification [388] Defendants' Exhibit E for identification.

The Clerk: E for identification.

(The document referred to was marked Defendants' Exhibit E for identification.)

Q. (By Mr. Huebner): Will you point out to the court on E for identification the feature which you have there illustrated?

(Testimony of John N. Wolfram.)

A. I have formed in the side wall of the sleeve head a small concave portion, which I believe is what Mr. Huebner wished me to do.

Q. I wanted you to do that, and now I will ask you if in your opinion the modification which you have exhibited to the court, E for identification, is within the spirit of the teaching of the patent in suit?

A. I think it is.

Q. Does it make any difference just how deep this concavity is in the face of the sleeve head?

A. Yes. I would say it makes quite a difference.

Q. How deep could it be proportioned to the cross-sectional thickness of the sleeve head?

A. Well, it would have to be quite shallow in order to retain what we might call a solid sleeve head. It would have to be quite shallow.

Q. So the one that is shown here, you would consider that to be a solid sleeve head? [389]

A. The way I have it shown there, it would probably be considered a solid sleeve head.

Q. Now, if the part that you called "pipe" in Exhibit D for identification were of a relatively soft metal and the nut were tightened down on the sleeve, there would be probably some expansion of the sleeve, would there not?

A. I doubt it very much.

Q. Well, it is a relative matter?

A. I don't think there would be.

Q. But even if you had a soft metal tube and a little harder sleeve, there would still be some expansion of the sleeve head, wouldn't there?

(Testimony of John N. Wolfram.)

A. I don't think that you would get expansion with that figure there. In fact, I don't think that the entire drawing—I think it is quite obvious that no sleeve head expansion is anticipated.

Q. I see. Well, then, if there is no sleeve head expansion in Exhibit D for identification, when the nut is tightened up, there would always remain clearance between the outside of the sleeve head and the inside of the nut, would there not?

A. If there is no expansion of the sleeve head, then you would retain whatever clearance you started with.

Q. Incidentally, do you consider the illustration in Exhibit D for identification to be within the spirit of the [390] teaching of the patent in suit?

A. No, not at all.

Q. Would you tell the court why not?

A. Well, in the first place, it is quite obvious that in this patent it is not anticipated that there will be any expansion of the sleeve head. One reason I say this is the fact that the sleeve head diameter here is very close to the root diameter of the thread, and if there is any sleeve head expansion, you would never get the sleeve out of the nut, and it would complicate disassembly and give you a number of disadvantages.

Q. That is about the only difference, then, that you see between this illustration, D for identification, and the patent?

A. Oh, no. This patent or this illustration, not only does it not provide for sleeve head expansion,

(Testimony of John N. Wolfram.)

I mean it doesn't anticipate sleeve head expansion, but even if you should get expansion in the sleeve head, there is no thought here of getting free expansion with hoop tension at one end of the sleeve, and of limiting your sleeve head expansion at the other end of the sleeve. [391]

Q. At what end of the sleeve do you want to limit sleeve head expansion under the teaching of the patent?

A. Well, at the region of contact between the nut shoulder and the sleeve shoulder.

Q. Do you have to limit expansion by confining the parts together? I thought that is the zone where you said there was the least expansion anyway, or let's say the intermediate zone, at least.

A. That is the region where we said there would be a limited amount of expansion, yes, the intermediate zone.

Q. And then you think that this doesn't follow the teaching of the patent because there isn't shown to be a contact between the external circumference on the sleeve head and the inside space of the nut?

A. Well, there is no provision here for limiting the expansion at the upper end of the sleeve while you permit free expansion at the lower end of the sleeve.

Q. Your point is that the patent requires that there be a physical limitation of radial expansion of the sleeve head at the shoulder area?

A. The patent definitely shows and states that provision is provided for limiting the expansion of the sleeve head in that region.

(Testimony of John N. Wolfram.)

Q. Well, is that why, then, that you agreed that your sketch, Figure 8 in Exhibit C, for identification, is within [392] the scope of the patent?

A. Yes, Figure 8 sketch here shows a step in the wall of the nut and provides a means for limiting the expansion at the shoulder end of the sleeve.

Q. An actual physical confinement of the shoulder area by the nut?

A. It provides the means for such limitation.

Q. And that is one of the principal distinctions, then, that you draw between what is under the patent and what is outside the scope of the patent?

A. Yes, I think that that is one of the features of the patent.

Q. Then, if it were physically demonstrated by measurement or by the exhibits themselves that the fittings here accused, or the parts assembled here accused to be infringements of the patent, have no actual contact between the circumferential face of the sleeve head and the corresponding cylindrical interior of the nut, such a device would be outside the patent in suit, wouldn't it?

A. If the device didn't have any provision for limiting the contact in that region, while providing means for having free expansion at the lower end of the sleeve, if it didn't have those things then it wouldn't be under the patent, that is, it wouldn't be under certain claims of the patent.

Q. All right. Which claims? 2 and 3, [393] isn't it?

(Testimony of John N. Wolfram.)

A. I think that specific provision is in claims 2 and 3.

Q. Claims 2 and 3, is that right? A. Yes.

Q. Will you please take this Exhibit D, for identification, and refer to a chart which I will call your attention to that you prepared. Plaintiff's Exhibit 49, do you have a copy of it? I will show you our copy to save time. It was represented by you to be Figure 2 of the patent in suit modified by lines that you drew on to indicate zones. Do you have your copy? A. Yes, I do.

Q. Will you take Exhibit D, for identification, and draw similar zone areas on that, using green ink?

Mr. Freeman: Do you have any green ink?

Mr. Huebner: He has it in his fountain pen, that is why I suggested that he use it.

A. I don't quite see how I can draw the similar zone areas, because this Exhibit D doesn't have those zones.

Q. (By Mr. Huebner): It doesn't? Well, do the best you can. As nearly as you can, make similar zones, put them in, and if they don't apply, then explain to the court why they don't apply.

Mr. Freeman: I think he already answered it, that he couldn't do it because it didn't apply. [394]

Mr. Huebner: All right. We will take it another way, then.

Q. (By Mr. Huebner): Your Exhibit 49 has a zone A, doesn't it? A. That's right.

Q. And that zone A extends from slightly above

(Testimony of John N. Wolfram.)

the shoulder on the sleeve upwardly, is that correct?

A. That's correct.

Q. Now, isn't there a similar region in Exhibit D, for identification?

A. Well, there is a portion of the sleeve that fits the tube that extends upward along the tube, if that is what you mean.

Q. I put my pencil in the nut area down near where the nut rests on the shoulder of the sleeve, wouldn't a line drawn across there correspond to your line which delineates zone A?

A. Well, it would correspond in a way, that is, it would correspond in relative position on the sleeve, perhaps, but it wouldn't define the same thing that the line defines in Exhibit 49.

Q. Well, your line, which is the lower extremity of zone A in Exhibit 49, indicates that from there on up is the zone of least resistance, doesn't it, or least expansion? Which is it? [395]

A. No, I said that was the zone in which we don't want expansion.

Q. All right. In Exhibit 49, the patent figure, you don't get expansion, do you?

A. Not at that upper part of the sleeve.

Q. Not in zone A. If you drew a line across in a corresponding physical position in Exhibit D, for identification, would you get any expansion from that line outwardly toward the letter B?

A. Expansion toward the letter B? I am not sure I followed the question.

Mr. Huebner: Read it, please.

(The question was read by the reporter.)

(Testimony of John N. Wolfram.)

Q. (By Mr. Huebner): I will qualify it so it will be a little clearer. Would you get any radial expansion in the area from such a line outwardly toward the letter B? Actually you wouldn't get any, would you?

A. I don't believe you would get it if you followed that drawing. [396]

Q. Now, will you please draw a line across so that it will correspond as nearly as possible to the line defining the lower part of the zone A?

A. Speaking of the physical position?

Q. Yes.

A. (Witness complying.)

Q. Will you kindly place the letter A in the area represented to be defined in part by that line?

A. (Witness complying.)

Q. Now, in your Exhibit 49, you have an intermediate line representing part of zone B, that is the one extremity of zone B. Where is the nearest point in Exhibit D for identification where such a line could be similarly drawn?

A. Are you now speaking of the structural similarities?

Q. I am speaking of the zone that is illustrated in this Exhibit D for identification. Put a line B on Exhibit D for identification as nearly approximating the corresponding position of the line that I am pointing to, being an intermediate line on Exhibit 49.

A. That is what I meant. You mean approximately the structural or physical position.

(Testimony of John N. Wolfram.)

Q. All right. You do it the way you feel it should be done. [397]

A. (Witness complying.)

Q. Now, please place the letter B intermediate the two lines.

A. (Witness complying.)

Q. Then you have in your Exhibit 49 a zone C, which requires a third line. Will you kindly place on Exhibit D for identification the best approximation of the corresponding line?

A. Do you want that labeled "C"?

Q. And label it C.

A. (Witness complying.)

Q. Thank you. In this zone B on the thing illustrated in Exhibit D, would there be some expansion of the sleeve when the nut is tightened?

A. No, I don't think so.

Q. Will you tell the court why not?

A. Well, because I think that that fitting with the use of lead pipe—well, first of all it is difficult to tell exactly what is there, because I don't know whether that fitting is for a very small diameter tube or a large diameter tube.

Q. Well, may it be assumed that this disclosure is applicable to either a small or a large or a middle sized tube.

A. Well, if you used it for both the large size and [398] small size tube, would you use the same relative proportions of the parts, dimensionally and cross-section?

Q. I presume you would. You take an illustra-

(Testimony of John N. Wolfram.)

tion that you can conceive based on this drawing where there would be expansion in the zone B.

Mr. Freeman: I suggest you give him a hypothetical question, rather than asking him to assume something. You tell him what you want and then get his answer.

Mr. Huebner: I prefer to do it my way, unless otherwise directed by the court.

Will you read the question, please?

(Question read by reporter.)

The Witness: I would have to use my imagination to try to figure out just how to proportion that thing so I would know I would get expansion in the zone B.

Q. (By Mr. Huebner): Suppose you took an aluminum tubing and suppose you took the ordinary standard metals that are used for one of the current fittings for the other parts. Would you get expansion there in the zone B?

A. I think that would depend largely on the diameter tube that you used and the relative proportion that you make the parts.

Q. Would you get an expansion in zone C?

A. I will say this, if you get expansion in zone C, you would get expansion in zone B, also. [399]

Q. You would get expansion in zone C if you used the right kind of combination of materials, wouldn't you?

A. Yes, I think you would get expansion in zone A along with it.

Q. Now, would you refer to the patent in suit,

(Testimony of John N. Wolfram.)

please? Look at Fig. 2 to start with. There are two angles, to which I believe reference has been made. I would like first to inquire concerning the angle between the inside of the sleeve head and the outside of the tube. It has been called, has it not, a differential angle?

A. Yes. The angle bounded by the lines B and C, I think we refer to as a differential angle.

Q. What does the patent teach that that angle in there could be?

The Court: What do you mean?

Mr. Huebner: In degrees, your Honor.

The Court: You mean in degrees?

Mr. Huebner: In degrees.

The Witness: I don't recall that the patent states what the degrees should be.

Q. (By Mr. Huebner): How would one manufacturing this item from the patent know what degree angle to put in there?

A. Well, the drawing clearly illustrates that it is a small angle.

Q. What is your interpretation of a small angle as it [400] applies to this disclosure, in degrees now? Let's get down to brass tacks.

A. I think that the angle in degrees could vary depending upon what you are designing the fitting for, whether you are designing a lightweight fitting or a heavyweight fitting for maybe railroad work, or something else.

The Court: I wonder if I could ask a question for my own information? This aluminum tubing

(Testimony of John N. Wolfram.)

flared, is it bought flared or is it flared upon the job?

Mr. Huebner: You mean is it flared prior to being put into the point of use?

The Court: Yes.

Mr. Huebner: Well, it can't be very well flared in stock, because you have to get the fitting parts on more or less at the location, and I believe that most of the flaring is done by the consumer.

The Court: Well, then, the angle of the flare depends entirely upon the consumer, that is, he can make it either greater or smaller, more or less flared, is that right?

Mr. Huebner: He could, yes.

The Court: Well, then, the patent doesn't control, does it, the angle? In other words, the sleeve is made in a certain way or a certain angle, but the patent doesn't control what the consumer does relative to the tubing? [401]

Mr. Huebner: I don't know whether it does or doesn't. So far as patentwise goes, the consumer can put in whatever kind of a tube he wants. Actually in practice the consumer will follow a certain standard specifications when he flares the tube.

The Court: Well, that is true, but you know that human hands, even though they have a certain specification there is no certainty that they will follow the specification.

Mr. Huebner: That is true, and if they don't follow the principle that is shown here and flare the tube in such a way that there is what they call an

(Testimony of John N. Wolfram.)

initial angle, there would never be any infringement. The action of the customer in flaring the tube and then assembling these parts is an absolute necessity to establish a complete case of infringement, if in fact there is a copying of the patent.

The Court: The only thing the manufacturer can do, that is, as far as the fitting is concerned, is to determine the angle on that part of the sleeve. Now, it is entirely up to the consumer to insert a tube that will coincide or will fit the sleeve.

Mr. Huebner: And if he doesn't do it, he is obviously outside the patent. And if he doesn't do it and it isn't shown that he has done it, these people who make the parts and sell them cannot possibly be held as infringers.

The Court: There is nothing in the patent, is there, to [402] indicate what the slope or what the angle is on the sleeve, that is C on Figure 2?

The Witness: I think what the patent states is that this angle is cut away at an angle that is great enough so that you will obtain initial contact at the point of the sleeve, and it doesn't matter too much exactly what the angle is, as long as you bring about that result.

The Court: What I am trying to get at is this, that you have no control over the consumer, the consumer is the one that determines the angle of the flare.

The Witness: Yes, you do have control over the consumer, particularly in the case of the AN fit-

(Testimony of John N. Wolfram.)

tings, because there is a specification which sets forth the angles of the flare.

The Court: Let me ask you a question, then. As an expert can you support your patent by plans and specifications that have been drawn subsequent to the issuance of the patent by the Army or the Navy.

The Witness: Well, I am not sure that that is a question for a technical expert.

The Court: That was my understanding of your statement, that the plans and specifications had indicated the angle. Supposing the plans and specifications of the AN fitting do indicate the angle, does that help you on the patent?

The Witness: I perhaps don't know too much about the law [403] part of the questions, but——

The Court: Excuse me. I will withdraw that question and I will ask your counsel. This is getting into a legal question.

Mr. Freeman: As long as these defendants make a fitting which brings about initial toe contact, that is, contact between the inside angle on the sleeve and the outside of the flare, that is where it engages first at that particular point, and that the remaining portion of the angle of the sleeve, and, again, the inside angle, is spaced away from the flare, they come within the scope and spirit of claim 1 of the patent.

The Court: What I am getting at is this: the holder of the patent, evidently from the evidence that has been discussed here and the discussions

(Testimony of John N. Wolfram.)

that have ensued, has absolutely no control as far as the consumer is concerned relative to the flare; it may make a larger flare or make a smaller flare, that is as far as angle is concerned. Now, what I am wondering is this: Can you develop a fitting or a gadget, or a sleeve, give it a certain angle, and then say, now, the only purpose of this is that it contacts at the toe, if it contacts at the toe we are entitled to the patent?

Mr. Freeman: Your Honor, we must start on the premise that the fitting is to be used in connection with flared tubing, and when the tubing is flared it is flared in accordance [404] with the angles or the relationship of the two parts between which the flare of the tube is adapted to be gripped. Now, if your Honor is going to drill a hole in a board and put a bolt in that board, and the bolt was a quarter-inch bolt, your Honor wouldn't use a three-sixteenths bit to do that, nor would your Honor likely use one that is five-sixteenths, you would use that which is the proper one to do that particular job. Now, in this particular case, we have here a situation where—I am now talking about initial toe contact brought about by what has here been referred to as the differential angle—both defendants in this case so arrange their sleeve, that is, the inside angle on the sleeve, so that there is initial toe contact. Now, of course it is very easy to make a thing not work, anybody can do that, you can gum it up so it just won't work. But we must start on the premise that Parker taught the world

(Testimony of John N. Wolfram.)

for the first time initial toe contact, along with the remaining portion of the claim, by which a very definite and beneficial result was obtained. Now, they come along, the defendants, and employ or make fittings to obtain every advantage that Parker for the first time taught the world. If they want to make a fitting that has all these things that they are talking about in the prior art, again I say we don't care. But these examples that have here been given, if I were to ask Mr. Masters if he ever made a single one of those examples, his [405] answer would be no. So that when we talk about an angle on a flare, or the position of the flare, we are talking about something that is rather definite.

The Court: Do I understand that your contention is that any sleeve that makes a toe contact, initial toe contact, is an invasion of the patent rights?

Mr. Freeman: Your Honor, if you will permit me, and I say it with great respect to your Honor's ability to follow claims, you must take a claim in its entirety, you cannot pick out a part of a claim and say, that's old, that's old, because even if that is true, your Honor, you still are entitled to a patent, and that was the question that your Honor asked my good friend, Mr. Huebner, and he said in as polite language as he knows how, "Maybe." I am going to say definitely to your Honor that when you take even these parts that your Honor has referred to many times as within the public domain, that if you take that which is in the public

(Testimony of John N. Wolfram.)

domain, you rearrange those parts, you make the changes that bring about an overall result defined within the overall claim, and they appropriate that, then they are an infringer, and the patent with respect to the overall claim is a valid contribution.

Now, coming back to your Honor's specific question, that initial toe contact, that isn't all of the claim.

The Court: But that is part of it. [406]

Mr. Freeman: That is part of it.

The Court: You just got through saying that that is one of the things that you object to about the Masters fitting, that it was a fitting in which there was initial toe contact.

Mr. Freeman: Plus the rest of it. They didn't take that alone; they took the entire combination of the claim.

The Court: Well, excuse me for breaking in. I was trying to clarify it for myself, Mr. Freeman, not for you or the witness. I am the fellow that has to do the deciding around here.

Q. (By Mr. Huebner): While we are on that subject, I will ask you to refer to claim 1 of the Parker patent in suit, and I want to read parts of it and ask you questions as we go along. Quoting, first:

"In a coupling for tubes having the ends thereof flared."

That is personally known to you to be an old subject-matter in the art, isn't it?

A. Yes, there have been flared tube [407] couplings.

(Testimony of John N. Wolfram.)

Q. Reading on:

“coupling members having threaded engagement with each other.”

You know that to be old in the art prior to Parker, don't you? A. That in itself, yes.

Q. Reading on:

“one of said coupling members having a seat associated therewith adapted to engage the inner face of the flared end of the tube.”

You know that to be old in the art prior to Parker, don't you? A. That in itself.

Q. And that, taken in association with all that has preceded in the quotations, is old in the art, isn't it? In other words, so far, we are up to this point building up old prior art, aren't we?

A. I think that is a fair statement.

Q. All right. Now, I am going to quote some more.

“and the other coupling member having a clamping shoulder,”

That, added to the other features, is also old in the art, is it not? A. I think that is true.

Q. I am going to quote some more.

“a sleeve surrounding said tube and having a solid head provided with a shoulder against which the [408] clamping shoulder of the coupling member engages,”

That feature, added to the previously referred to feature, is also old in the art prior to Parker, isn't it; known to you personally to be old in the art?

A. I think that is so.

(Testimony of John N. Wolfram.)

Q. I will read some more.

“said head having the inner surface thereof provided with a coniform flare”

To that point, ending the quote at that point, it is also old in the art to add that to what we have already quoted, isn't it? A. I think so.

Q. Now, I will read on:

“so shaped that the initial contact of the head with the flared end of the tube is at the free end of the head and adjacent the outer end of the flared end of the tube,”

In your opinion, is that last phrase, when added to the previously quoted phrases, old in the art or new? A. I think that is new.

Q. You think that is new with Mr. Parker in this patent? A. I think so.

Q. Now, we will read on:

“whereby during the clamping action said [409] head will be expanded and moved forward along the flared end of the tube into intimate contact with the outer surface thereof throughout substantially the entire extent of the flared surface on the sleeve head.”

Now, that last quoted descriptive feature is per se old in the art, to your knowledge, isn't it?

A. Just that last part——

Q. Beginning with the word “whereby,” my point is, and I am asking you, isn't that descriptive statement that I quoted, beginning with the word “whereby,” the same thing that will occur with various other forms of fittings known to you to be

(Testimony of John N. Wolfram.)

in the prior art? A. No, I don't——

Mr. Freeman: Just a minute. I am going to object to that, because you have constantly referred to the term "prior art." The term "prior art" has a very definite meaning, your Honor, in patent cases. They haven't introduced any prior art. If he wants to refer to any of these physical devices or refer to some specific drawing, that is one thing, but when you use the term "prior art," which has a very definite meaning, then he should say what prior art he is referring to.

Mr. Huebner: I am referring to what the witness' own knowledge backs up.

The Court: The witness is an expert. He has testified [410] as to this patent. He has testified as to the claims. Now, you say that the term "prior art" has a——

Mr. Freeman: A definite meaning.

The Court: ——a definite, specific meaning?

Mr. Freeman: Right.

The Court: I have been using the term "in the public domain." That is probably the wrong term to use.

Mr. Huebner: They are synonymous in effect.

The Court: But when I say "in the public domain," I mean in the domain where anybody can use it, nobody has the right to use it exclusively. Let's forget the term used. I would like to know whether the last part is in the public domain or not, if you can answer.

The Witness: No, I don't think that it is be-

(Testimony of John N. Wolfram.)

cause it includes the words "said head." It says, "whereby during the clamping action said head will be expanded and moved forward." It has already been defined, that is, the head has already been defined as being a solid head, and I don't know of any prior art where a solid head engaged the tube, the initial toe contact, and expanded as set forth in this claim.

Q. (By Mr. Huebner): Your point is that the words "said head" must be limited by a reference to the particular kind of head described above in the claim. Now, if you substitute the words "said head" for "a head," so it would read, "whereby during the clamping action a head," or "the head," or [411] "any head," that is used in that kind of combination, "will be expanded and moved forward," and so forth, that descriptive phrase there would apply, wouldn't it, to the public domain subject matter?

A. I think that would depend on how you interpret or define the word "head."

Q. You personally know that there are three-piece fittings in the prior art or public domain, do you not? A. Yes.

Q. And that those three-piece fittings which are in the public domain include a head with a tapered seat on it, is that right? A. That is correct.

Q. And that those public domain three-piece fittings include a sleeve with an interior surface that is conical intended to rest down upon a flared end of a tube which fits on the flared end of the body,

(Testimony of John N. Wolfram.)

isn't that right? A. That is correct.

Q. That is all public domain so far. Isn't it also true in the public domain this type fitting includes a nut which can be screwed down on the body and which nut has a clamping shoulder that engages a clamping shoulder on the sleeve and thereby enables the whole thing to be pressed by screwing it up into a tight fitting; isn't that in the public domain? [412] A. Yes.

Q. And in that public domain subject matter, the solid head, as distinguished from a concave head, is also known, isn't it?

A. There are solid head sleeves in the prior art.

Q. So that the solid head, there is nothing new about a solid head on a sleeve, right?

A. Not in itself, that is correct.

Q. Now, when you tighten up the kind of an assembly that you and I have just talked about as being in the public domain, you do expand the sleeve, don't you, that is, it does expand the head of the sleeve?

A. There are prior art couplings in which the sleeve does expand, yes.

Q. And in that type, there is a movement, is there not, a movement forward, along the flared end of the tube, that is to say, a movement of the sleeve head forward along the flared end of the tube? That occurs, doesn't it?

A. That is correct. As you expand, there is a slight movement forward.

Q. And in this public domain subject matter.

(Testimony of John N. Wolfram.)

when you have that kind of a fitting, the kind you are talking about, there is an intimate contact with the outer surface, that is to say, an intimate contact between the outer surface of the flare and the inner surface of the sleeve head [413] throughout substantially the entire extent of the flared surface, isn't there?

A. Yes, sir, both initially and finally.

Q. Now, we come back then to what you say is new. Beginning in the claim with the words "so shaped," it is your point, if I understand you correctly, that the crux of this thing, what Parker has added to the public domain subject matter, is some sort of shaping of the parts that the initial contact of the head with the flared end of the tube is first at the free end of the head. That would be what you would call toe contact, would it?

A. That is what we call toe contact, yes.

Q. All right. So it is the free end of the head that has to touch first, and that touching must occur adjacent the outer end of the flared end of the tube. That is another qualification, isn't it?

A. That is another qualification, yes.

Q. And it is those two qualifications which make up the crux, as far as the claim 1 goes, of what you say Parker added to the public domain?

A. Well, no, because you have got to include with that the definition of the head. This part that you quoted, starting with the words "so shaped," refers to the shaping of the inner surface of a solid head or a sleeve.

(Testimony of John N. Wolfram.)

Q. Yes, but the solid head is not new; that is public [414] domain.

A. Yes, but I don't know of any solid head that had been so shaped.

Q. All right. Then let's isolate this thing. That is the crux, or whatever you may want to call it. I presume it would begin with the words "so shaped" in line 13 in the right-hand column, wouldn't it? I am talking about claim 1, line 13, of the page, in the right-hand column.

A. Yes, that is where the words "so shaped" are.

Q. Now, beginning with the words "so shaped," and down to and including the word "tube," followed by a comma in line 17, will you examine that particular clause? A. Yes.

Q. Correct me if I am wrong, but it is my understanding your opinion is that that phrase characterizes whatever invention Mr. Parker may have contributed.

Mr. Freeman: As to claim 1.

Mr. Huebner: As to claim 1.

The Witness: No. What I said—I think I said it twice—is that it is this quoted paragraph or phrase, taken in combination with some of the preceding language of the claim, particularly the solid head.

Q. (By Mr. Huebner): Well, we will assume that the head they are talking about in this blocked off place is the solid head he has defined. [415]

A. Well, if you include the——

Q. Let's include the solid head.

(Testimony of John N. Wolfram.)

A. The solid head.

Q. The solid head which he talks about, yes. Let's include the solid head that he talks about.

A. Yes.

Q. And if we include the solid head, then this blocked off phrase, beginning with the words "so shaped" and ending with the word "tube," that is the crux of the contribution which you contend Mr. Parker gave?

A. That is the new structure, yes.

Q. All right. Now, in view of that, if the devices charged to infringe don't physically possess that relationship, they wouldn't come within the scope of the claim, would they?

A. Well, if you include with that the range of equivalents, I mean, as I understand it, the claim doesn't have to be read literally. If you are just making a broad statement, I don't think that each word has to be read literally.

Q. Well, let's get down to points here then. What do you interpret the patent to mean when it says in this claim that the initial contact of the head with the flared end of the tube must be adjacent the outer end of the flared end of the tube? What does adjacent the outer end of the [416] flared tube mean?

A. Well, I think in this case what the patent claim is trying to set up in words is that the initial contact is toward the largest diameter end of the flare.

(Testimony of John N. Wolfram.)

Q. How close does it have to be to respond to the patent claim?

A. Well, I don't think that you can define that in terms of inches, as long as you obtain the principle that the patent features.

Q. Look at Fig. 2 of the Parker drawing, and in the illustration there, that initial contact is shown as being very close to the extreme end of the flare on the tube, isn't it?

A. It appears to be about an eighth of an inch back of the end of the flare of the tube.

Q. That is an eighth of an inch, according to the scale of the illustration, right? A. Yes.

Q. Now, if that initial contact between some part of the sleeve and the outer face of the tube, the flare, is back somewhere at the shoulder where the bend begins, that wouldn't respond to this claim, would it?

A. Well, I think that if you had any spacing at all between the point where the flare starts, that is, where the outer surface of the tube starts to enlarge, if you had any [417] spacing at all, you could come within the principle of this patent. [418]

Q. Do you mean to say if the sleeve touches anywhere along the outer surface of the tube flare from the time it begins to bend outwardly, that is within the scope of this language of the claim?

A. I say it could be within the scope of the patent, if the initial contact was at any point that was spaced from the point where the tube starts to enlarge.

(Testimony of John N. Wolfram.)

Q. Well, let's get the drawing in front of both of us where the court can see it. The way the patent refers is to have the initial contact very close to the end of the flare, isn't it?

A. It is about an eighth of an inch from the end, as I said.

Q. In the drawing? A. Yes.

Q. Supposing the initial contact, instead of being just where it is shown in the drawing, is made back here in the recess, would that be within the scope of the patent?

A. Well, as I said, if it was back farther along the flare toward the small end of the flare, it could still be within the patent, yes. You could still have a differential angle from that point backward.

Q. Would you consider that, then, to be adjacent the outer end of the flared end of the tube?

A. I think that you could give it that interpretation, [419] because after all the words are merely trying to express a principle.

Q. All right. I just want your interpretation. So that it really doesn't matter, as far as you read the patent, and claim 1 in particular, it doesn't matter whether this sleeve touches first down here near the end of the flare or back where the flare commences, does it?

A. Well, I think that along with that you must recognize that there are other elements of the claim, and that you have to consider the entire claim.

Q. I know you have to consider it, and I don't mean to shut you off, and I won't. If you want to

(Testimony of John N. Wolfram.)

explain it, all right. But we can confine it and forget about the other elements of the claim for the moment. Your interpretation of this feature of the patent is that it doesn't matter whether the sleeve contacts first out here near the end of the flare, or even back at the base where the flare starts, is that your opinion?

A. No, I wasn't trying to make it as broad as that; I was just trying to say that it could touch initially at some other point and still be within the scope of the entire claim.

Q. Could it touch at some other point and fulfill the spirit of this description, and I am reading the words "adjacent the outer end of the flared end of the tube"? [420] A. I think that it could.

Q. All right. Now, refer back, if you will, to another angle that is talked about in the patent. You can look at Figure 2 of the patent in suit. Is there any dimension in degrees, that is to say any specification in degrees, recited in the patent regarding the angle d, small letter d, with an arrow pointing to a line? That is the angle on the outside of the sleeve head.

A. I don't recall that the patent sets forth a specific angle in the written part of the description.

Q. Well, it doesn't give it on the drawing either, does it? A. Not in degrees.

Q. And it doesn't tell you in the claims what the degree angle is, does it?

A. It doesn't define it in degrees.

Q. Now, as an engineer or an expert in this field,

(Testimony of John N. Wolfram.)

how many degrees would make such an angle?

A. Whatever is necessary to obtain the function or the principle that is involved.

Q. Well, how would you go about finding that out, then?

A. Well, I think the patent states that there is a close clearance or that the sleeve head is so shaped that it will contact in the upper region or the region of the clamping shoulder, and that is spaced in the lower region. And once [421] that principle is brought to light, I think that it wouldn't be too much trouble to determine an angle that would be satisfactory.

Q. If it is so simple, just tell the court briefly how you go about determining what the angle will be.

A. Well, I think that the specific angle could probably best be determined by straightforward engineering analysis, or else experiment, either one.

Q. Would you be able to determine it? Do you have enough knowledge of the principles involved to figure that out?

A. I think if I set about doing it I think that could be determined.

Q. You are a man skilled in the art; how would you determine what that angle should be? Tell the court the line that you would follow in determining what that angle should be.

A. Well, as I mentioned, it could be determined by a stress analysis or by experiment.

Q. Is that your complete answer?

(Testimony of John N. Wolfram.)

A. I think so.

Q. Are there any circumstances under which that angle might be as much as 10 degrees and operate satisfactorily?

A. That depends upon what you are designing for.

Q. I said any circumstances, any fitting embodying these [422] principles, and you can make your own example if you want to, is there any fitting that could be built up out of this patent and use an angle as much as 10 degrees and be within the teaching of the patent?

A. Yes, I think it could.

Q. What is the least angle that could be employed and embody the teaching of the patent?

A. Well, the least angle would be that angle that would still produce the principle that the patent teaches.

Q. Well, in degrees, what is the least possible angle in degrees under any materials that you want to assume that are put into this thing that would work as the patent teaches and be within the scope of the patent subject-matter?

A. Well, that is a very broad question.

Q. Sure. You know a lot about the art.

A. I don't think that there is any specific cut-off point, because you could always hedge another minute or two minutes, perhaps.

Q. Would 1/10 of one degree comply with the teaching of the patent?

(Testimony of John N. Wolfram.)

A. It might if you had the other parts of the fitting proportioned, likewise.

Mr. Huebner: I am ready to go on, but perhaps your Honor wants to take the recess.

The Court: We will take our recess. We will recess for 15 minutes at this time.

(A recess was taken.) [423]

Mr. Huebner: Your Honor, I will at this time offer in evidence the Defendants' Exhibits A through E, both inclusive, which have been previously marked for identification.

The Court: They may be received.

(The documents referred to were received in evidence and marked Defendants' Exhibits A through E.)

Mr. Huebner: And with your Honor's permission, we will withdraw the pencil sketches for the purpose of making photostats.

The Court: You may have the permission.

Q. (By Mr. Huebner): Now, let's look at claim 2 of the Parker patent in suit, Mr. Wolfram, and see if we can find out what your opinion is Mr. Parker contributed to the world so far as is defined in claim 2. I will quote parts of it as we go along.

"In a coupling for tubes having the ends thereof flared, coupling members having threaded engagement with each other, one of said coupling members having a seat associated therewith for engaging the inner flare of the flared end of the tube and the other coupling member having a clamping shoulder and an

(Testimony of John N. Wolfram.)

inner wall, a sleeve surrounding said tube and having a solid head capable of radial expansion during the clamping action, said head being provided with a clamping [424] shoulder against which the shoulder of the coupling member engages and an inner flare surface for engaging the outer flared end of the tube,"

Up to that point, it is public domain, isn't it? In other words, what I have been referring to as art prior to Mr. Parker, and what the court has referred to as public domain? A. Yes.

Q. Now, picking up the language of the claim again,

"said clamping shoulder being spaced a distance back of the inner flare surface,"

That is also in the prior art or public domain, isn't it? A. Yes.

Q. To your personal knowledge? I am basing these questions on your personal knowledge.

A. Yes.

Q. Reading on:

"the outer surface of said head and the said inner wall of the coupling member being so shaped relative to each other that when the sleeve head expands during the clamping action they will contact only in the region of the clamping shoulder,"

Now, is it your opinion that that phrase qualifies the [425] subject matter insofar as Mr. Parker's contribution to the art is concerned?

A. Yes, with the head being a solid head.

(Testimony of John N. Wolfram.)

Q. Well, we already had the solid head, which was part of the prior art. We already had that in the combination, you will recall. Now, let's read more of the claim,

"the remaining portion of the head being free from contact with the coupling member whereby the clamping force of the head against the tube is determined by the spring tension of the metal forming said head."

Now, as far as that last quoted portion goes, you have got in the prior art or public domain, don't you?

A. I am not sure. I don't know of any prior art, I can't think of any at the moment, where there is a head which can expand and have hoop tension and be free from contact at the lower end.

Q. There is a phrase in this blocked off portion reading, "region of the clamping shoulder." What is meant by that?

A. Well, that is the region that we were discussing this morning in connection with the pencil sketches.

Q. Where you drew a little red circle on a sketch? A. Yes. [426]

Q. Are you referring to Figure 1 of Exhibit B?

A. Yes, I am.

Q. All right. So that in order to conform to this language, "the region of the clamping shoulder," there must be a contact between the nut and the head of the sleeve not only on the plane horizontal surface of those respective pieces, but also

(Testimony of John N. Wolfram.)

part way down the side on the circumferential surface, that is your testimony?

A. No, I didn't say that it had to go part way down the side. It could be right at the corner.

Q. And terminate at the corner? A. Yes.

Q. So that if there is a clearance from the corner on down between the inner wall of the nut and the outer wall of the sleeve, I want to repeat that, a clearance from the corner all the way down, that is within the meaning of this language in the claim?

A. Yes, as long as at the corner there is some means for limiting the expansion.

Q. Limiting radial expansion?

A. Yes.

Q. And do you consider that to be essential under the teaching of the patent and in particular this claim, do you?

A. Yes, it is part of the claim.

Q. Well, then, would you say that a physical structure [427] which had all these parts of the claim, except that there was a clearance between the outside of the sleeve head and the inside of the nut, all the way up to the corner, that such a device would not be within the scope of this claim 2?

A. If it did not provide any means at the corner for limiting the expansion.

Q. For limiting radial expansion?

A. Radial expansion.

Q. That is what you mean? A. Yes.

Q. Then it would not come within the scope of this claim? A. Yes, I think so.

(Testimony of John N. Wolfram.)

Q. I meant to raise my voice to suggest a question. What is your answer? A. Yes.

Q. It would not come within the scope of the claim?

A. That's correct, if there is no means for limiting the expansion, even at the corner, then I don't think that the claim would cover it.

Q. All right. Now this phrase "so shaped" in claim 2 enables the shaping for the function described to be either a deformation of the sleeve or a deformation of the nut, or both, doesn't it?

A. I am not sure what you mean by a deformation. It is [428] a formation.

Q. Let us say instead of having straight or plain wall surfaces they are recessed or they are angled, now that angling or recessing can occur either on the sleeve or on the nut, can't it?

A. Yes, in line with those sketches that we made previously.

Q. And those sketches would be included in what you talk about as the range of equivalents under these words "so shaped" in claim 2? A. Yes.

Q. Let's go to claim 3. I am going to read what I think is prior art or public domain, and then we will stop and compare:

"In a coupling for tubes having the ends thereof flared, coupling members having threaded engagement with each other, one of said coupling members having a seat associated therewith adapted to engage the inner face of the flared end of the tube and the other cou-

(Testimony of John N. Wolfram.)

pling member having a clamping shoulder, a sleeve surrounding said tube and having a solid head provided with a shoulder against which the clamping shoulder of the coupling member engages, said head having the inner surface thereof provided with a coniform flare.” [429]

Up to that point it is public domain or prior art, isn't it? A. Yes.

Q. Then we come to a phrase:

“so shaped that the initial contact of the head with the flared end of the tube is at the free end of the head and adjacent the outer end of the flared end of the tube,”

Now, that I presume from your testimony is one of the two crucial features of this claim 3, is that right? A. That's correct.

Q. And go on now and read a little further:

“the outer surface of said head and said inner wall of the coupling member being so shaped relative to each other”

Then it goes on and explains:

“that when the sleeve head expands during the clamping action, the portion of said head contacting with the flared end of the tube is at all times out of contact with the coupling member whereby the clamping face of the head against the tube end is determined by the spring tension of the metal forming said head.”

Now, that last quoted portion is a second crucial feature of this claim 3, isn't it?

A. Yes. [430]

(Testimony of John N. Wolfram.)

Q. And both of the crucial clauses are characterized by the limiting words "so shaped," is that right?

A. Yes, the words "so shaped" are repeated in both of those clauses.

Q. As a matter of fact, the words "so shaped" qualify the crucial features of each one of the three claims of the patent, don't they?

A. Did you say the three claims of the patent?

Mr. Huebner: Perhaps you had better read the question.

(The question was read by the reporter.)

The Witness: That is correct, those terms or words appear in all three claims. [431]

Q. I would like to ask you now what benefit, if any, do you find by providing an angular difference between the outside of the sleeve head and the inside of the nut, rather than merely a straight clearance that goes all the way down the corresponding area?

A. Did you ask what the benefit was?

Q. Yes, if there is a benefit.

A. Well, the shaping of the parts in that manner gives the principle which is disclosed in this patent, that is, of having the three zones which we speak of. It provides the means for limiting the expansion in one zone and for permitting the free expansion in another zone.

Q. You are talking about radial expansion, I presume?

A. Yes.

Q. But in an illustration, such as Exhibit D, I

(Testimony of John N. Wolfram.)

presume you find that does not contain the benefit that you have talked about, because there is no confining radial expansion outwardly in the region of the shoulder?

A. That is one of the reasons. The other reason is that I don't find any expansion in that structure.

Q. Well, all right.

A. I made samples and didn't get expansion.

Q. You made samples of this?

A. Yes, I did. [432]

Q. Have you any with you?

A. I think so.

Q. May we look at them?

Mr. Freeman: Yes, you can. I am wondering if I can't ask the witness to come down and pick up his own props, as long as the defendant is asking us to produce the props that they need.

The Court: Do you want that underlined in the record?

Mr. Freeman: No.

(Witness leaving stand and returning with article.)

Q. (By Mr. Huebner): You hold in your hand an assembly of parts, which you say was made up to exemplify, physically exemplify, Exhibit D?

A. Yes.

Q. May I look at it, please?

The Court: While you are figuring up your next question, I wonder if I can ask one. I would like

(Testimony of John N. Wolfram.)

to ask opposing counsel, can you get a patent upon a fixture which says that fixture is so shaped so that it will produce certain results, without giving any description as to the angle, the size, or anything else?

Mr. Huebner: I say no.

The Court: Well, wait a minute. I am asking Mr. Freeman.

Mr. Freeman: The answer, as far as we are concerned, is [433] yes. In other words, the patents are taken out to teach mankind the benefits or to exemplify the contribution made. The patent must be definite enough so one skilled in the art could take the illustrative drawings, together with the description thereof, and then bring about the end result that the man teaches. A patent is not granted upon a thing that is 20 degrees or 5 degrees and two minutes. It is not granted upon whether a thing is four inches long or eight inches long. It is granted upon a combination of a plurality of parts, each of which performs a function, and collectively they bring about the complete ensemble of the claim. That is what is here involved.

Now, it is our position that when the patentee Parker stated in claim 2, for example, that the parts brought about this end result, so that you would have the portion of the sleeve head adjacent the region of contact, and then had another part where he said that portion of that same sleeve head adjacent the flare was free to expand, then Parker produced and told the world how to make a physi-

(Testimony of John N. Wolfram.)

cal device, and that is all that he is called upon to do.

He says you must get the kind of clearance that will permit the very thing he describes in his patent specifications; in other words, he describes in his patent specifications, starting along with column 2, Fig. 2, you might say starting with line 11, on down to line 59, he speaks about the [434] particular head on the sleeve, the outer surface of the head, he speaks about the spring tension, he speaks about where you have unlimited expansion.

Now, when we talk about unlimited expansion of the lower end of the sleeve, that means unlimited expansion. Of course, you could over-expand that beyond its elastic limits. Then, of course, it just won't work after that. In other words, what Parker told the world is when you want spring tension, you have to stay below the elastic limits of that sleeve. If you go beyond the elastic limits of the sleeve, you no longer have spring tension.

So Parker, in describing his patented structure, discloses and, as clearly as anyone could, describes what he means by the sleeve being so shaped.

The Court: Mr. Freeman, I didn't want you to argue the matter.

Mr. Freeman: And I don't want to argue it either, your Honor.

The Court: I wanted to know whether or not in your opinion anyone could get a patent for a fixture in which he describes the fixture as being so shaped as to produce a certain result.

(Testimony of John N. Wolfram.)

Mr. Freeman: There are many cases——

The Court: You say he can?

Mr. Freeman: Yes. The hydraulic press case, decided [435] by the Supreme Court, is a very good example of that. We are prepared at the proper time, your Honor, to furnish authority for the statement we make.

The Court: I assumed that you were ready.

Mr. Freeman: Yes.

The Court: Mr. Huebner, you disagree, I assume.

Mr. Huebner: I violently disagree.

The Court: And you will produce authorities to support your violent disagreement from the courts?

Mr. Huebner: Yes. I did that in my opening statement. One of the most important cases is the General Electric case. Another recent case discusses the point, even after it has been pared off by the Supreme Court, in Walker vs. Halliburton, which is directly in point.

The language of these claims, I contend, makes them absolutely fatally defective. The patent as to all three claims is invalid almost on its face, if not on its face.

The Court: Mr. Huebner, I suppose you have been engaged, and I know you have been engaged, in the patent business for a good many years and you are perfectly familiar with patents and patent applications. Do you mean to tell me that when you make an application for a patent, you have

(Testimony of John N. Wolfram.)

got to describe the fixture by metes and bounds, by angles, or can you describe it by results?

Mr. Huebner: You can never describe it entirely by results. [436] You must have some structure. If the patent is broad and pioneer in character, your language may be more general as to proportions and dimensions and angles. If the thing you are contributing is in an art that is crowded almost to the point of exhaustion, that is to say, the art is so crowded that what you have done is a minor step, then you are required to give accurate dimensions and angles, and particularly when the angles are critical or crucial, and the action or reaction of the parts is the critical or crucial thing, you have got to give enough information so somebody can take your patent and go to work and build one that will do the job.

The Court: Would it have met your objection if they had included in this patent an angle of 5 degrees?

Mr. Huebner: It would have met some of our objections if they had specified the degree of angle in the two crucial instances which are lacking. Then it would have been simpler for the manufacturer, if he weren't bound by government restrictions, if the patent were clarified as to what the claim is, what the monopoly is, then the independent manufacturer who wants to make something knows what he must avoid to stay outside the boundary of the patent monopoly. That is the very purpose of requiring conciseness and accuracy and certainty in

(Testimony of John N. Wolfram.)

not only the patent description but in the patent claims. [437]

The Court: Now may I ask you another question? I assume that the diagrams of the patent are just as much a part of the patent as the words of the patent, is that correct?

Mr. Huebner: I never balanced their worth, your Honor, but one is taken with the other, one supplements the other.

The Court: One supplements the other, that's right. So if someone could take the diagram, if they couldn't understand the language, if they could take the diagram and figure it out, would that be sufficient?

Mr. Huebner: In some cases it might. I will tell you, it might be sufficient, your Honor, as far as the descriptive part of the specification goes, but it is never sufficient so far as the claims are concerned, and the claims have to be considered and construed separately from the description. Even if you took the drawings, your Honor, and by looking at the drawings and looking at the general language of the description, you could tell what you had to do to make one of these things work, and then you come down to the claims which are characterized, depend entirely for their validity, if they are valid, on a phrase "so shaped," the patent is nevertheless invalid for uncertainty under Section 4888 of the Revised Statutes, because the claims must properly and accurately and unambiguously define the invention. So that there are metes and

(Testimony of John N. Wolfram.)

bounds within which the man has his monopoly and outside of which the public is free to take over. [438]

The Court: You don't think an engineer could look at Figure 2 and figure out the degree of angle, d for instance?

Mr. Huebner: He might be able to figure out approximately what this angle is, but he couldn't necessarily figure it out from these lines, because the lines are thick enough that in small sizes a few thousandths of an inch one way or the other might make a lot of difference. It might even be the difference between infringement and non-infringement. And some of these lines are more than a thousandth of an inch wide.

The Court: They haven't attempted to limit the angle in any way, they haven't said an angle of five degrees or ten degrees or fifteen degrees, they have just said an angle.

Mr. Huebner: That is right, and that is one reason——

The Court: They are including all angles.

Mr. Huebner: Apparently they are.

The Court: Let's assume, for instance, that this is the first time that anyone ever thought of putting an angle, designated "d" on Figure 2, on the head of the sleeve, do you think they could get a patent on that?

Mr. Huebner: I think it only involves mechanical skill, and that if a clearance is desired, the obvious thing for a mechanic skilled in the field is

(Testimony of John N. Wolfram.)

to either make a straight cut-off section, which gives you clearance, or if you don't want it clear all the way down, cut it at an angle. It is [439] obvious.

The Court: Let's assume from time immemorial people had been making these fittings and they had been making the head of the sleeve so that it would snugly fit, there was no angle at all, it would just snugly fit——

Mr. Huebner: No clearance?

The Court: No clearance.

Mr. Huebner: Contact metal to metal?

The Court (Continuing): ——then somebody thought of the idea, maybe if we put an angle in there so it would not contact they would make a better fitting, and they experimented and found it was true that by putting a little angle there they made a better fitting; could they get a patent upon that?

Mr. Huebner: Under those facts, your Honor, they might have a good patent. That is, the person who did that might have a good patent.

That would be a rather rare situation where nobody in the art over all the years had ever discovered the advantage of a clearance in there, and suddenly a man comes along and for the first time it has ever occurred he puts in an angle and makes a clearance, that might be a patentable invention.

The Court: Well, was this the first time in this patent that there was an angle put in, "d"?

Mr. Huebner: It probably was the first time

(Testimony of John N. Wolfram.)

that an angle [440] was put so that it is initially an angle. It is not the first time there has been a clearance in there. There are lots of examples which show a clearance. And one of our points is that there is no advantage in an angle over an ordinary clearance. In fact, we don't think that it has as good a co-operation as where you have a straight clearance all the way down.

The Court: Supposing, for instance, from time immemorial they had been working on these fittings, and they had made the fitting snug, so that there was contact between the head and the bolt or the nut, and then somebody had experimented and they left, say, an eighth of an inch clearance all the way up, but it didn't produce an entirely satisfactory fitting, and someone came along and said, "We have tried it snug, contact to contact, metal to metal, and we have tried it with a separation in there, now I wonder what would happen if we put an angle there, attach it at the top and leave it open at the bottom," and they tried it and it worked?

Mr. Huebner: On your example, your Honor, that might be patentable invention. Just taking your example as you have given it, and I don't want to confuse it with a lot of ifs and ands at this point.

The Court: It has to be very simple if I understand it.

Mr. Huebner: There is more to this case, how-

(Testimony of John N. Wolfram.)

ever, than just that example. That is one step in the logic. [441]

The Court: I know, but I can't digest all the case at one time. If I can digest one point at a time, maybe we can sum this up.

Now, are you willing to admit that as far as you know this patent is the first patent in which the angle was used? You say there have been other patents in the prior art, or in the public domain, that had a space between the collar and the nut?

Mr. Huebner: That is the sleeve and the nut.

The Court: The collar of the sleeve and the nut. But this is the first time, if I understand correctly, that this question of an angle has been used.

Mr. Huebner: As far as I know, the art, your Honor, this is the first disclosure of an angle of this character initially present between the outside of the sleeve head and the inside of the nut.

The Court: Well, excuse me for breaking in. I wanted to clarify that situation.

Mr. Huebner: That is all right. There is more to it, though, that will develop.

The Court: Opposing counsel tells me that there is more to it than just that one thing.

Mr. Huebner: One of Mr. Parker's earlier patents, I don't know whether it is in evidence or not, I will look, No. 1,977,240, showed an angle which was very apparent in [442] Figure 5. I don't know whether I am getting ahead of the evidence or not.

Mr. Freeman: I think you are a little bit ahead of it. I have no objection.

(Testimony of John N. Wolfram.)

Mr. Huebner: I tried to answer the court's question. There is an angle shown in one of Mr. Parker's own patents, and I better not say any more about it yet, because the patent isn't in evidence. It is No. 1,977,240.

Mr. Lyon: It is Exhibit 26.

Mr. Huebner: Then Mr. Freeman and I are both wrong. Exhibit 26.

If your Honor will look at Figure 5 you will see an angle there. Of course that will require some discussion and explanation, I assume, at a subsequent point of the trial. Now, that is prior art, the one you are looking at. Exhibit 26 is part of the prior art.

The Court: From the diagram it looks as if there is an angle. Whether there is, or not, I don't know. But it certainly looks like it.

Mr. Huebner: There is just as much of an angle shown in the drawing on that patent as there is shown in the patent in suit, and the patent in suit doesn't tell how much of an angle. It just says an angle. But there is an earlier showing, and that is why I wanted to qualify my answer to your Honor. [443]

Q. (By Mr. Huebner): On this subject of angle, I would like you to look, Mr. Wolfram on your own illustrated drawing in the collection of drawings Exhibit 28, and the particular one I suggest for your attention is Exhibit 28-Q. Do you have it convenient? A. Yes, I do.

Q. This drawing I think you prepared to illus-

(Testimony of John N. Wolfram.)

trate the angle that has been the subject of our recent conversation, "permits maximum shoulder contact," is that an important feature?

A. Yes.

Q. This drawing, however, illustrates a clearance at the upper end of the sleeve shoulder so that there is a space between the outside circumferential surface of the shoulder and inside of the nut. Is that a correct showing?

A. Yes, that is correct, in this view.

Q. What is it in this drawing or in the device represented by this drawing which performs the function you talked about a while ago, namely, that of confining the expansion of the sleeve head in the region of the shoulder?

A. It would be any point of contact which is established when the sleeve head expands.

Q. Well, it doesn't show, then, in this drawing, does it?

A. No. This drawing was made practically free-hand [444] for illustrative purposes, and it doesn't actually show a contact point. I might also say that this drawing shows the parts in their initial finger tight condition.

Q. How do you know that there is a radial expansion of the sleeve in the region of the shoulder?

A. Well, you can observe it from samples.

Q. Do you mean you have made measurements?

A. We have the cut-away samples where you can see the expansion.

Q. Have you ever made measurements?

(Testimony of John N. Wolfram.)

A. Not measurements at that point, no.

Q. In other words, have you, to clear it up in my mind and perhaps in the court's mind, have you ever taken three of these pieces that go together to make up a fitting on the end of a flared tube and measured the outside diameter of the shoulder of the sleeve before it is tightened up, and then measured it again afterwards to see if there was any difference?

A. I have at the lower end of the sleeve.

Q. My question was at the upper end, at the shoulder end.

A. No.

Q. You have not done that?

A. No. [445]

Q. Then your statement that there is a radial expansion in the shoulder end of the sleeve is based upon your theory as an engineer, is that right?

A. No. I say you can see it in the samples.

Q. What sample? Will you pick one out where you can see that?

The Court: Maybe I don't understand your term "expansion." I thought expansion was the blowing up and extending out.

Mr. Huebner: That is one meaning of it.

The Court: Is that what you are talking about here?

Mr. Huebner: In this particular case, we are talking about radial expansion. Maybe I can point it out on this drawing, Exhibit 28-Q. When I say radial expansion, I talk about expansion in this way, the horizontal direction on the drawing only.

(Testimony of John N. Wolfram.)

A general expansion, as you say, would be in all directions.

The Court: Yes. You mean by an expansion, then, a pushing out?

Mr. Huebner: A pushing out of the surface at the shoulder radially outwards as distinguished from this direction or distinguished from that direction.

The Court: In the light of that explanation, I would like to ask the witness a question.

Mr. Huebner: Yes, sir. [446]

The Court: Do you mean to tell me you can tell whether there has been expansion by just looking at these fittings?

The Witness: Well, I have an example here, your Honor, where you can see that the corner of the sleeve is out into contact at the upper end of the sleeve.

The Court: Well, is that why you say there is an expansion? Will you point out to me where you say there is an expansion?

The Witness: I am saying that at the portion of the sleeve adjacent the shoulder, the sleeve head is out into contact with the wall of the nut. At the same time, you can observe that it is still out of contact at the bottom end of the sleeve.

The Court: Well, does that indicate there has been an expansion, or does it indicate that when you have taken the nut and tightened it down, that there has been a tendency of these two parts to get closer together?

(Testimony of John N. Wolfram.)

The Witness: Yes. When you tighten the fitting, the two parts tend to get closer together.

The Court: What I am asking you is, can you take a fitting this size, and this is a large fitting, and just by looking at it observe that there has been an expansion?

The Witness: Well, in this particular fitting I know that when we started out, the sleeve head was smaller at that end and was not out to a diameter large enough to engage the [447] outside wall of the nut.

The Court: You are drawing your conclusion from the results obtained rather than from the observation.

The Witness: Well, I observed the parts beforehand and then after assembly.

The Court: I am glad you are an expert, because I certainly can't see it. That is beyond me.

Q. (By Mr. Huebner): The court's questions to you were upon exhibiting Plaintiff's Exhibit 36, is that right? A. That is correct.

Q. Before you assembled the parts of this exhibit 36, did you make any physical measurements of the dimensions?

A. May I look at the fitting?

Q. Yes. A. Yes, I did.

Q. What did you measure the diameter across the shoulder of the sleeve?

A. What did I measure the diameter?

Q. I say, did you measure the diameter across the shoulder of the sleeve? A. Yes.

(Testimony of John N. Wolfram.)

Q. What was that dimension?

A. I would have to refer to notes to give you the exact figure.

Q. Well, do you have them handy? [448]

A. I am not sure that we have them in court.

Mr. Freeman: We have got them.

Mr. Huebner: All right, if you please.

The Court: May I ask a question? You say you measured it before. Did you measure it afterwards?

The Witness: Well, your Honor, you can't very well measure it——

The Court: Afterwards?

The Witness: ——afterwards; not that accurately. That is a measurement in thousandths of an inch. You could lay a ruler across there——

The Court: I know we are getting down into very small distances.

The Witness: That is correct.

The Court: Well, I don't think, Mr. Freeman, you will have to dig those up this afternoon. It is 4:00 o'clock. Maybe in the light of your questions, they will have these for you in the morning.

Mr. Huebner: I hope so, your Honor.

The Court: I was interested in finding out if it was measured before, if there was a way of measuring it afterwards.

Mr. Huebner: That is a thing that should be determined.

The Court: Of course, as the witness says, we are dealing in very small distances, and it really

(Testimony of John N. Wolfram.)

takes a microscope to understand these [449] distances.

Mr. Huebner: Yes.

The Court: Well, we will recess now until 10:00 o'clock in the morning.

(Whereupon, at 4:00 o'clock p.m., an adjournment was taken until 10:00 o'clock a.m., Wednesday, June 21, 1950.) [450]

